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THE COMPREHENSIVE PLANNING PROCESS: SEVERAL VIEWS

1975

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THE COMPREHENSIVE PLANNING PROCESS: SEVERAL VIEWS

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Introduction

Planning is a comprehensive, coordinated and continuing process, the purpose of which is to help public and private decision makers arrive at decisions which promote the common good of society. It is complex and it is diverse.

The American Institute of Planners' particular area of interest is the planning for unified social, economic and physical development of communities and their environs, and of states, regions and the nation. Within this context the core of knowledge which has been identified as central to the planning profession includes:

1. Knowledge of a comprehensive planning process;
2. Knowledge of the interrelationships among facilities and resources and of activities generated by them;
3. Knowledge of the development of policies and implementation programs for public or private agencies or individuals which are intended to direct or influence change in the public interest; and
4. Knowledge of the impact of policy and programmatic decisions on related activities and the environment.

The purpose of this book is to improve understanding about the comprehensive planning process. Because of the dynamics of planning, there are different views about the process and approaches which have developed over the years. Therefore it is important to analyze these views, evaluate their appropriateness and relate them to our own view and interest.

The points of view which have been selected, are not to be considered *the* views on comprehensive planning, but rather representative of diverse views. They address comprehensive planning's scope, products, methods, time frame and clients, from theoretical and practical perspectives.

Your analysis of these views and those referenced in the footnotes, should broaden your perspective of the comprehensive planning in the United States.

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The Comprehensive Plan

Reprinted by permission of the International City Managers Association, Washington, DC. *Principles and Practice of Urban Planning:* Chapter 13.

THIS CHAPTER DESCRIBES what a comprehensive plan is and how it is to be used, but it does not tell how to make a plan (i.e., what analyses and techniques to use in formulating the policies and design proposals contained in the plan). For guidance in the required planning methods, the reader should consult the other chapters of this book dealing with population, land use, transportation, etc. The preceding chapter discusses the determination of development objectives basic to the comprehensive plan; succeeding chapters explain the means for implementing the plan.

This chapter principally concerns the comprehensive plan for a municipality, rather than for a county or metropolitan government. A municipality usually has regulatory powers over the use of all private land within its territory and responsibility for most of the public activities. A county or metropolitan government often has a more limited jurisdiction because there are autonomous municipalities within its boundaries. Consequently, plans for these broader units of government tend to rely more on predictions of what will happen than decisions as to what should happen. To date there has been more experience with municipal plans, and in discussing their functions, contents, and procedures, one can cite a large body of professional materials and case examples.

What Is a Comprehensive Plan?

A comprehensive plan is an official public document adopted by a local government as a policy guide to decisions about the physical development of the community. It indicates in a general way how the leaders of the government want the community to develop in the next 20 to 30 years. Because it is general and agencies devote more of their time to charting approximate, it is not a piece of legislation. T. J. Kent, Jr., one of the leading proponents of the comprehensive plan concept, has given this definition: "The general plan is the official statement of a municipal legislative body which sets forth its major policies concerning desirable future physical development."[1]

Notice that Kent speaks of the "general plan"; this term is used interchangeably with "comprehensive plan." Another synonym, "master plan," is probably the most familiar to the ear. This phrase has fallen into disrespect among planners because of its misuse in the past to describe plans which were not general and comprehensive (such as "master street plan" or "master park plan"). The term "city plan" is also used.

It is often said that the essential characteristics of the plan are that it is comprehensive, general, and long range. "Comprehensive" means that the plan encompasses all geographical parts of the community and all functional elements which bear on physical development. "General" means that the plan summarizes policies and proposals and does not indicate specific locations or detailed regulations. "Long range" means that the plan looks beyond the foreground of pressing current issues to the perspective of problems and possibilities 20 to 30 years in the future.

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[1] T. J. Kent, Jr., THE URBAN GENERAL PLAN (San Francisco: Chandler Publishing Co., 1964), p. 18.

Although there is some variation in the content of comprehensive plans, three technical elements are commonly included: the private uses of land, community facilities, and circulation. The first of the three is sometimes called the "land use plan," but this is a misnomer because community facilities and streets are also uses of land. Kent labels this part the "working and living areas section." Comprehensive plans may cover other subjects, such as utilities, civic design, and special uses of land unique to the locality. Usually there is background information on the population, economy, existing land use, assumptions, and community goals. Every plan includes a drawing of the community on which the major design proposals are brought together to show their interrelationships.

Among most city planners, the preparation, adoption, and use of a comprehensive plan are considered to be primary objectives of the planning program. Most of the other plans and procedures applied in the course of local planning are theoretically based upon the comprehensive plan. Many planners have chafed under the pressure of day-to-day activities which denied them the time to take a more thoughtful look at the long-range development of the community. In the past dozen years, though, the federal government has increasingly conditioned financial assistance upon conformance to a local comprehensive plan, a spur which has caused hundreds of local governments to prepare plans.

Relationship of the Plan to Other Documents

Several other documents used in local planning are often confused with the comprehensive plan—in particular, the zoning ordinance, official map, and subdivision regulations. These are specific and detailed pieces of legislation which are intended to carry out the general proposals of the comprehensive plan. The confusion is understandable because these documents are often adopted prior to a comprehensive plan, and many communities which do not have a plan do have one or more of these. Such a sequence is contrary to good planning practice, and in some states the existence of these tools in the absence of a plan may cast doubt upon the legality of this legislation.

Particularly troublesome has been confusion between the zoning ordinance and the section of the comprehensive plan dealing with the private uses of land. Both deal with the ways in which privately-owned land will be used, but the plan indicates only broad categories for general areas of the city, whereas the zoning ordinance delineates the exact boundaries of districts and specifies the detailed regulations which shall apply within them. Furthermore, the plan has a long-range perspective, while the zoning ordinance is generally meant to provide for a time span of only five to ten years.

Other tools of the trade which are meant to effectuate the comprehensive plan include the capital improvements program and its accompanying budget and special-purpose regulations, such as a sign ordinance. A different level of plan, sometimes called a "middle-range development plan,"[2] is supposed to implement the comprehensive plan by concentrating on a particular area of the city or a particular functional element. Such plans are more specific and have a lesser time perspective, say five to ten years.

The growth of urban renewal programs since 1949 has created some confusion with the comprehensive plan, particularly when these activities are conducted by an agency distinct from the regular planning staff. More than one hundred cities have had community renewal programs prepared. To some professionals this work has seemed to overlap the preparation of a comprehensive plan. The relationships among these planning efforts have not really been clarified, but they probably will evolve gradually. Urban renewal tends to emphasize residential land and the older parts of the city; geographically and functionally, it is not truly comprehensive. Community renewal programs, while considering long-range policies, tend to recommend specific improvements to be made in the near future. It seems logical to number urban renewal and community renewal programs among the activities designed to implement the comprehensive plan.

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[2] See Martin Meyerson, "Building the Middle-Range Bridge for Comprehensive Planning," Journal of the American Institute of Planners, XXII (Spring, 1956), pp. 58–64.

Why Is A Plan Needed?

Local government has a great deal of influence on the way in which a community develops. The buildings, facilities, and improvements provided by local government affect the daily lives of most citizens, give form to the community, and stimulate or retard the development of privately owned land. Typically about half of the land in a municipality is in public ownership. It is true that the workings of the real estate market help determine the uses of private land, but these uses are regulated by the local government. The local government is the only body with an opportunity to coordinate the overall pattern of physical development of the community. This is as it should be, since the decisions of the local government are made by a legislative body which represents the citizenry at large.

The local government is inescapably involved in questions of physical development. At every meeting of the legislative body, development decisions must be made concerning rezoning, street improvements, sites for public buildings, and so on. This has been especially true since World War II because of extensive population movements, suburban growth, and increased public expenditures on capital improvements.

The local government—and particularly the legislative body made up of lay citizens—needs some technical guidance in making these physical development decisions. This guidance can be provided by professional city planners, but the form in which they give it is important. If they give their advice on the basis of expediency of *ad hoc* "quickie" studies, then there is no guarantee that next month's decision will not negate the one made today. The local government needs an instrument which establishes long-range, general policies for the physical development of the community in a coordinated, unified manner, and which can be continually referred to in deciding upon the development issues which come up every week. The comprehensive plan is such an instrument.

It is true that it is possible to govern a municipality without a comprehensive plan; many cities have done so, and a few planners even recommend it. It has also been true, especially before World War II, that the plans of many communities have been ignored and forgotten. Probably the incentives offered by the federal government, rather than a spontaneous interest in city planning, have caused many communities to prepare comprehensive plans. Nevertheless, the fact that more and more communities are preparing plans, and are making use of them, clearly points to the success of the comprehensive plan. No one has suggested removing the federal requirements, and the federal planning assistance program (which requires matching funds from the locality) is very well subscribed. Expenditures for planning are increasing at a rapid rate, and much of this money is going toward the preparation of comprehensive plans. Public interest in planning matters has increased greatly, as a scanning of newspapers and popular magazines will show. In many cities there has been clamor for a plan and criticism over delays in preparing a plan. It appears that many painful years of experience have produced a comprehensive plan that has become a workable, useful, and accepted tool for cities.

Development of the Plan Concept

There is nothing novel or recent about city plans. The earliest known city planner was Hippodamus of Miletus who prepared plans for several Greek cities in the fifth century B.C. Throughout history, plans have been drawn for cities in Europe, Asia, and America, and many of them have been carried out. Famous early American plans include L'Enfant's for Washington, William Penn's for Philadelphia, and General Oglethorpe's for Savannah.[3] All of these plans were in the nature of architectural blueprints. They usually started with a bare site and were commissioned by a central authority which had power to execute them unilaterally.

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[3] For an excellent history of these early plans, see John W. Reps, THE MAKING OF URBAN AMERICA: A HISTORY OF CITY PLANNING IN THE UNITED STATES (Princeton: Princeton University Press, 1965).

The Columbian Exposition in Chicago in 1893 initiated the "City Beautiful Movement" and brought a different type of city plan to the United States. It proposed general improvements to an existing city, emphasized aesthetics, and was sponsored by a civic organization. The best known example of this type was Daniel Burnham's plan for Chicago, published by the Commercial Club of Chicago in 1909.

The type of comprehensive plan in use today—concerned with the continuing comprehensive development of an existing city, prepared by or for the local government, and based on analyses of population, economy, and land use—came into existence about 50 years ago. Because of the incremental way in which concept of the plan evolved, one cannot point to any single plan as the first true modern comprehensive plan.[4] It was also about this time that the men engaged in city planning work became conscious enough of the special nature of their endeavors to think of themselves as forming a distinct profession: The American Institute of Planners was founded in 1917 as the American Institute of City Planning.

Olmsted

One of the early leaders of the profession was Frederick Law Olmsted, Jr., son of the famous landscape architect, who became distinguished in his own right as a city planner. At the National Conference on City Planning in 1911, he gave perhaps the first description of what a city plan is:

> We must cultivate in our minds and in the mind of the people the conception of a city plan as a device or piece of . . . machinery for preparing, and keeping constantly up to date, a unified forecast and definition of all the important changes, additions, and extensions of the physical equipment and arrangement of the city which a sound judgment holds likely to become desirable and practicable in the course of time, so as to avoid so far as possible both ignorantly wasteful action and ignorantly wasteful inaction in the control of the city's physical growth. It is a means by which those who become at any time responsible for decisions affecting the city's plan may be prevented from acting in ignorance of what their predecessors and their colleagues in other departments of city life have believed to be the reasonable contingencies.[5]

Olmsted believed that the subject matter of the plan should encompass all uses of land, including private property, public sites and facilities, and transportation routes. His general conception of the plan remains remarkably valid today. While many early plans have been criticized as static pictures which soon gathered dust on city hall shelves, Olmsted emphasized the need to keep the plan up to date.

Bettman

Alfred Bettman was another of the major intellects in the formative years of the planning profession. Originally a lawyer, he was city solicitor of Cincinnati and gradually became more and more involved in city planning, until he was recognized as an expert on planning legislation. As such, he naturally formed definite ideas about the purposes, contents, and uses of the comprehensive plan. The statement he made at the National Conference on City Planning in 1928 gave a more specific picture of the plan:

> A city plan is a master design for the physical development of the territory of the city. It constitutes a plan of the division of the land between public and private uses, specifying the general location and extent of new public improvements, grounds and structures, such as new, widened or extended streets, boulevards, parkways or other public utilities and the location of public buildings, such as schools, police stations, fire stations; and, in the case of private developments, the general distribution amongst various classes of uses, such as residential, business and industrial uses. The plan should be designed for a considerable period in the future, twenty-five to fifty years. It should be based, therefore, upon a comprehensive and detailed survey of things as they are at the time of the planning, such as the existing distribution of existing developments, both public and private, the trends towards redistribution and growth of population, industry and business, estimates of future trends of growth and distribution of population and industry, and the allotment of the territory of the city in accordance with all such data and estimated trends, so as to provide the necessary public facilities and the necessary area for private development correspond-

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[4] In 1925, Cincinnati became the first large city to officially adopt a plan.

[5] Proceedings of the Third National Conference on City Planning, Philadelphia, Pennsylvania, May 15–17, 1911 (Boston: 1911), pp. 12–13.

ing to the needs of the community, present and prospective.[6]

In general, the ideas of Bettman and Olmsted constituted the accepted view of the comprehensive plan during the period from 1910 to 1930. During that time only a handful of plans was actually produced, since the planning profession was not well known.

With such a good start, one might think there would have been clear sailing for the comprehensive plan, but such was not the case. Two developments in the late 1920s combined to plunge the plan into a period of misuse and confusion which lasted until after World War II. The first development was the upholding by the U.S. Supreme Court of the power of local government to zone private property, in the famous Euclid case in 1926. This decision prompted hundreds of communities across the country to prepare zoning ordinances, and the comprehensive plan was all but forgotten. The second development was the issuance of the Standard City Planning Enabling Act.

The 1928 Act

Herbert Hoover, when Secretary of Commerce, appointed a nine man Advisory Committee on City Planning and Zoning which drafted the Standard City Planning Enabling Act published in 1928.[7] Olmsted and Bettman were members of this distinguished panel. Another member was Edward M. Bassett, who later wrote the first book entirely devoted to the plan.[8] The Act did a great deal to promote city planning throughout the United States, and it emphasized the importance of the comprehensive plan. However, it also contained several weaknesses and contradictions which caused much confusion and distraction in the development of comprehensive plans during the 1930s and 1940s. This was especially true because the Act was widely accepted, and many states based their planning enabling legislation on it.

For a detailed examination of the wording of the Act, the reader should consult Kent's book.[9] Here it must suffice to summarize the four principal weaknesses of the Act. This is important, not just as an historical exercise, but because misunderstanding on these points persists today.

1. Confusion between the zoning ordinance and the private land use portion of the comprehensive plan. The distinction between the two has been explained: The plan is long-range and general, it has no legal effect on property; the ordinance is short-range and precise, it does have legal effect. Nevertheless, the two have often been confused. The zoning ordinance includes a map of zoning districts called a "zoning plan," which is often confused with the unified drawing of design proposals included in the comprehensive plan.

The Act contributed to this misunderstanding by stating that the comprehensive plan should include "a zoning plan for the control of height, area, bulk, location and use of buildings and premises"—things which do not belong in a comprehensive plan. This was a contradiction, because in footnotes the authors of the Act stressed the necessity of keeping the plan general.

As a result of this confusion and the growing interest in zoning, many communities prepared and adopted zoning ordinances without ever making the land use plans on which zoning should be based. This diverted attention from general, long-range policies to the controversial details which seem to dominate zoning questions.

2. Piecemeal adoption of the plan. The Act not only allowed but encouraged adoption of parts of the comprehensive plan separately from the complete plan. These parts could be geographical sections of the city or functional subdivisions of the subject matter. While the Act emphasized that the plan is an organic whole in which every part is interrelated with every other part, and that every part needs to

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[6] Planning Problems of Town, City, and Region: Papers and Discussions of the Twentieth National Conference on City Planning, Held at Dallas and Fort Worth, Texas, May 7 to 10, 1928 (Philadelphia: William F. Fill Co., 1928), p. 142.

[7] U.S. Department of Commerce, Advisory Committee on City Planning and Zoning, A Standard City Planning Enabling Act (Washington: Government Printing Office, 1928).

[8] Edward M. Bassett, The Master Plan; With a Discussion of the Theory of Community Land Planning Legislation (New York: Russell Sage Foundation, 1938).

[9] T. J. Kent, Jr., *op. cit.* See especially pp. 31–59.

be studied with these interrelationships in mind, it stated that there is no need to withhold adoption or publication of a completed part pending completion of the whole.

With this sanction, it became common practice for communities to adopt separately sections of the comprehensive plan. Often these were treated and labeled as though they were complete in themselves (e.g., "master thoroughfare plan" and "master school plan"). Of course, such plans cannot be properly evaluated without examining the land use plan, as well as the relationships between these different plans. Often communities never completed all sections of the comprehensive plan or never brought them all together in a single document.

One principal objective of a comprehensive plan is to coordinate plans for all geographical parts and functional elements of the community. Obviously this objective is defeated by piecemeal adoption. The separate preparation of sections of the plan also abets the unfortunate tendency for planners, engineers, and other government officials to develop special interests in narrow subjects and to lose the broad perspective essential to comprehensive planning.

3. Lack of a definition of the essential technical elements of the Plan. The Act did not offer a specific, clear definition of the minimum essential technical elements of physical development which should be dealt with in a comprehensive plan. Since relatively few plans had been completed up to that time, and there was no widespread concensus as to their contents, this naturally caused uncertainty among the many local government officials who were introduced to city planning through the Act. This lack contributed to the confusion with the zoning ordinance and the piecemeal adoption of the plan. It was only after many years of difficult experience that there came to be agreement that every comprehensive plan should at least cover (1) the use of privately-owned land, (2) community facilities, and (3) circulation.

In a footnote to the Act, the authors stated that "An express definition has not been thought desirable or necessary."[10] Nevertheless, the difficulty of discussing something left vague compelled them to include in the text an illustration (which actually amounts to a definition):

> . . . (the) plan . . . shall show the commission's recommendation for the development of said territory, including, among other things, the general location, character, and extent of streets, viaducts, subways, bridges, waterways, waterfronts, boulevards, parkways, playgrounds, squares, parks, aviation fields, and other public ways, grounds and open spaces, the general location of public buildings and other public property, and the general location and extent of public utilities and terminals, whether publicly or privately owned or operated, for water, light, sanitation, transportation, communication, power, and other purposes; also the removal, relocation, widening, narrowing, vacating, abandonment, change of use or extension of any of the foregoing ways, grounds, open spaces, buildings, property, utilities, or terminals, as well as a zoning plan for the control of the height, area, bulk, location, and use of buildings and premises. . . .[11]

Of course, the contradiction between the text and the footnote added to the confusion of those following the Act.

It is not known why the authors decided to exclude a specific definition; apparently they thought each community should work this out for itself. It is known that during this period Bettman opposed a standard definition, while Edward M. Bassett believed the contents of the plan should be precisely specified. Perhaps the ambiguity of the Act resulted from a compromise between the two. Incidentally, later in his life Bettman changed his mind and wrote a specific definition of the comprehensive plan.

4. Distrust of the municipal legislative body. The Act made the planning commission, rather than the legislative body, the principal client of the comprehensive plan. This idea was widely accepted and persists in current planning practice. As a result, planning was isolated from the mainstream of political decision making, and plans became very precise and technical. This was probably one reason why many plans prepared during the 1930s and 1940s had so little effect upon the actual development of cities.

The authors of the Act deliberately promoted this conception, as there was little dispute about it at the time. The Act was openly based on the belief that municipal legislators were not competent to determine and follow wise policies for the physical development of their communities. Planning was considered too complex and esoteric for them to understand, and they were believed incapable of establishing long-range policies because of their preoccupation with day-to-day affairs. The solution proposed in the Act was to set up an independent planning commission which was free of the control of the legislative body, and even restricted its legislative powers. The Act also neglected to require publication, or even public presentation, of the plan, so that it in effect became a confidential document.

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[10] *Ibid.*, p. 14.

[11] *Ibid.*, pp. 14–16. Copyright © 1964, by Chandler Publishing Company. Reprinted by permission.

The relevant provisions of the Act were:

1. The planning commission was so constituted (with six citizen members with six-year, overlapping terms) as to be independent of the mayor or legislators.
2. The planning staff was made responsible exclusively to the planning commission.
3. The plan was not to be adopted by the legislative body.
4. The legislative body was required to refer all physical development matters to the planning commission, and could override the commission's recommendations only by a two-thirds vote.

The Act thus implied distrust of the legislative body and isolated it from the preparation of the comprehensive plan, even though most specific proposals following from a plan eventually require legislative approval. The plan was to be prepared by the planning staff and planning commission, who are not accountable to the public. It was not unusual for the planners to rely on a "back-pocket plan" which was never made public. Such a plan, while it might appear to be primarily technical in content, must inevitably be based on implicit policies which are formulated by technicians and not determined through public debate.

Developments Since World War II

The end of World War II brought a quiet revolution in local planning and inaugurated a new era in the development of the comprehensive plan concept. There was a change in attitude toward physical development and planning on the part of local government officials, caused principally by the surge of urban growth which followed the War. A backlog of needed public improvements had accumulated during the Depression and the War, general prosperity prevailed, and money was available. The population spurted upward and suburbs mushroomed, creating changes in the structure of cities.

The planning profession also expanded greatly at this time. Before the War there had been only a handful of recognized planning schools (notably Harvard and M.I.T.), but now many new ones were organized. More and more cities took on permanent planning staffs, and in many cases, the staff was given full departmental status in the local government.

Because physical development matters became so important in local government, municipal legislators became more interested in planning. Since the War, they have gradually reasserted their authority over planning decisions, and support for the independent planning commission has waned. Legislators have felt the need for a plan, emphasizing long-range policies, which would serve their needs.

The federal government also became involved in local planning, because of the high incidence of problems in the suburbs, in the older inner city, and spanning both of these areas. Starting with the redevelopment program of the Housing Act of 1949, federal legislation had a great influence on local planning. The urban renewal concept begun by the Housing Act of 1954 required each applicant to have a "workable program," one element of which was preparation of a comprehensive plan. The 1954 Act also created the "701" program, which provides matching funds to local governments for comprehensive planning.[12] Federal grant programs—for public housing and open space, for example—have increasingly required the conformance of proposed improvements to a local plan.

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[12] Through the end of 1964, the "701" program had allocated $79 million in grants for planning in 4,462 localities. See U.S. Housing and Home Finance Agency, 18th Annual Report, 1964 (Washington: Government Printing Office, 1965).

These forces have converged to create a tremendous growth in the number of communities which have prepared comprehensive plans. During the decade following the end of the War, several of the larger cities completed plans. During the last decade, the movement has spread to cities of all sizes, and the number of plans completed is in the hundreds. The trend shows no sign of abating.

There has been a change in the character of plans, too. As legislative bodies became more involved, the plans became more general and less specific, and more oriented to policies than planning techniques. (Of course, the technical complexity of planning has increased greatly, but has generally found its expression in other documents.) The comprehensive plan of today is quite different from the one of 30 or 40 years ago. Many members of the planning profession now think of themselves as "general planners."

Several of the conflicts of the 1930s have been largely resolved. The distinction between the zoning ordinance and the comprehensive plan is now widely understood. Piecemeal adoption of the plan is now rare. There is a consensus as to the minimum technical elements of the plan, and several credos, all essentially similar, have been promulgated.[13] However, distrust of the legisative body continues among planners. The position presented in this chapter—that the legislative body is the principal client of the comprehensive plan—should perhaps be regarded more as representing an emerging viewpoint than as reflecting prevalent current practice.

There also remain some in the profession who oppose the comprehensive plan, emphasizing that planning is a continuing process. However, now the planners who prepare comprehensive plans are also proponents of "planning is a process," with their stress on the continued review and amendment of the plan. The "one-shot plan," which is allowed to weather rather than being periodically examined and adjusted, is largely a bugaboo. The principal difference between the two schools seems to be whether the policies used to guide development decisions should ever be crystallized into a unified public document.

The Setting for the Plan

THE FORM OF LOCAL GOVERNMENT

Perhaps the key principle underlying the modern conception of the comprehensive plan is that it is an instrument to be used by those leaders of the community who establish the policies and make the decisions with regard to physical development. No matter what the local situation, the persons who have the power to coordinate physical development activities will need, and probably want, some kind of plan. Here it is pertinent to refer to the different forms of local government existing in the United States, as described in Chapter 18.

IMPORTANCE OF THE LEGISLATIVE BODY

Regardless of the form of local government, it is the legislative body which ultimately makes the decisions necessary to carry out public improvements and coordinate private development. The legislative body is elected by and answerable to the citizens. The legislative body has the advantage of being a pluralistic body, encouraging the consideration of a variety of views on any issue. For these reasons, it should be the legislative body which formulates the long-range policies to guide physical development.

This poses no special questions for the weak-mayor and commission forms of government since in effect there is no chief executive. In the council-manager form, the theoretical primacy of the legislative body in policy making is clearly recognized, but because of the important role of the manager as an all-around advisor, it is only realistic to involve him significantly in planning matters.

In the case of the strong-mayor form there is a problem, since the chief executive is elected to perform the function of policy making. Under this form the comprehensive plan must be more attuned to the needs and desires of the chief executive than under other forms. Nonetheless, the mayor cannot act unilaterally to establish policies, pass laws, or approve budgets; a large amount of power still reposes in the legislative body. It is also more in the public interest for planning matters to be debated openly by the legislators, rather than decided privately by the mayor's cabinet.

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[13] See T. J. Kent, Jr., *op. cit.*, pp. 61–64.

Thus, even in the strong-mayor form, the legislative body has a preeminent role in planning matters. Obviously the comprehensive plan must satisfy both the legislators and the mayor, if there is to be any hope of effectuation. If a majority of the legislators generally supports the mayor, there should be no problem. If there is a political impasse between the legislative body and the mayor, it does not bode well for the plan, but such situations hopefully are only temporary in extent.

The placement of so much power over planning in the legislative body runs counter to the long-prevalent distrust of legislators. Professional administrators would prefer to keep "technical" matters away from legislators. Yet it is clearly a subversion of democratic government for bureaucrats to determine policies, and supposedly technical decisions usually depend upon value judgments which are well within the province of the legislators.

The Role of City Planning in Local Government

The planning function does not fall neatly into either of the traditional categories of "line" or "staff" activities in government. The proper placement of planning in the municipal organization chart has long been a matter of dispute. There are several concepts of the role of planning also described in Chapter 18, each differing in its identification of the principal client of the planner.

1. An independent activity of the planning commission to whom the technical staff is responsible. This concept predominated during the early years of city planning, and it is still held by numerous planners.[14]

2. A staff aid to the chief executive. Robert Walker advocated this concept,[15] under which the planning director is a full-fledged department head who reports directly to the chief executive and is a member of his cabinet.

3. A policy making activity of the legislative body. The third concept holds that the legislative body is the principal client of the planning agency and should make the major planning decisions.

This concept placed planning under the control of the legislators. The political content of planning is given more weight than in the other two concepts. This is a rather recent idea which has arisen from the growing concern over the policy aspects of planning. As yet, probably only a minority in the planning profession holds this view.[16]

The Principal Client of the Plan

The comprehensive plan must be useful to many clients, but since their needs will differ, it is necessary to determine the principal client of the plan, the one whose needs must be met first. Different views of the principal client follow from the different concepts of the role of planning in local government.

Those who believe in the independent planning commission think the plan should be designed primarily for the use of the commission and should be adopted only by the commission. This was the prevailing practice during the early years of city planning. Under this arrangement, the legislative body must refer all physical development matters to the commission for its recommendations, and can overrule the commission only by a greater-than-majority vote.

Those who see planning as a staff aid to the chief executive think the plan should be shaped to serve him. This idea has not developed very fully, for experience has been that the typical chief executive does not want a plan to follow; he wants recommendations from the planner on specific problems.

Some planners believe the principal client of the plan should be the planning staff. This idea does not really fit any of the concepts of the role of city planning. Those who hold this view consider planning to be too technical to be understood by laymen. Frequently these planners prepare plans for themselves to use privately as a basis for making recommendations to the planning commission or chief executive.

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[14] For example, John T. Howard and Rexford Tugwell.

[15] Robert A. Walker, THE PLANNING FUNCTION IN URBAN GOVERNMENT (Chicago: University of Chicago Press, 1941).

[16] Its principal proponents have been Kent and Charles M. Haar.

Those who regard planning as primarily a policy making activity of the legislative body believe the principal client of the plan is the legislature. This concept is the one adopted by the author of this chapter, since it appears to him to offer the most promise for making city planning more effective. It is, after all, the legislative body that ultimately makes the decisions which either carry out or defeat the plan. Under this concept, the plan is primarily a legislative policy instrument, rather than a complex technical document. The planners must make their technical findings and professional judgments understandable and convincing to the legislators.

THE SCOPE OF THE PLAN

Probably the greatest controversy in the planning profession today concerns the substantive scope of city planning. Should it be broad and open-ended, encompassing anything with which local government might be concerned, or narrow and limited to subjects which directly pertain to the physical development of the community? The dispute is reflected in different views of the substantive scope of the comprehensive plan.

One faction believes that truly comprehensive planning must include the planning of social, economic, administrative, and fiscal matters, many of which are obviously interrelated with physical planning. Planning is regarded as a method or approach which can be applied to any subject matter. The city planner would become a central planner. The comprehensive plan might include plans for social and economic development and other nonphysical proposals. So far there have been few examples of these types of plans. Henry Fagin has suggested that a physical plan and all the other sorts of plans should be unified in an ultra-comprehensive "policies plan."[17]

The other faction would confine the scope of city planning to physical development (i.e., matters of location, size, and spatial relationships). Planning is thought of as being concerned with physical things, rather than as a particular body of techniques. This has been the traditional scope of city planning, and this view is customarily held by planners with physical design backgrounds.

This group recognizes the interdependence of physical, social and economic factors in community development, and it concedes that a physical plan must take into account objectives, analyses and forecasts from the nonphysical realm. The distinction is sometimes hard to pin down, but in general, a plan with a physical development scope will not emphasize economic and social development.

This faction acknowledges the need for non-physical planning, but would assign it to other than city planners. Thus, their argument depends upon who is considered to be a member of the planning profession.[18]

The trend seems to be that more nondesigners are entering the planning field, and the abilities available in the profession are becoming more varied and specialized. A broader scope for planning seems inevitable, although there is a stiff rear-guard action by the limited-scope faction. In time, no doubt some type of policies plan will emerge.

For the time being, however, it seems advisable for any community undertaking a comprehensive plan to focus upon physical development. There is ample need for coordination in this area, and involvement in the polemics of the planning profession would probably be a needless distraction. There has been so little experience in social and economic planning that anyone entering this area must adopt the posture of an experimenter. There is little danger that a physical plan will ever become superfluous; it would certainly be an important element of any more extensive policies plan.

The Functions of the Plan

Describing the functions of the comprehensive plan indicates how the plan should be used by the principal persons involved in the physical

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[17] Henry Fagin, "Organizing and Carrying Out Planning Activities within Urban Government," JOURNAL OF THE AMERICAN INSTITUTE OF PLANNERS, XXV (August, 1959), pp. 109–114. See Chapter 12 for an extended discussion of this approach.

[18] Hence, the membership standards of the American Institute of Planners have also been a focus for heated debate.

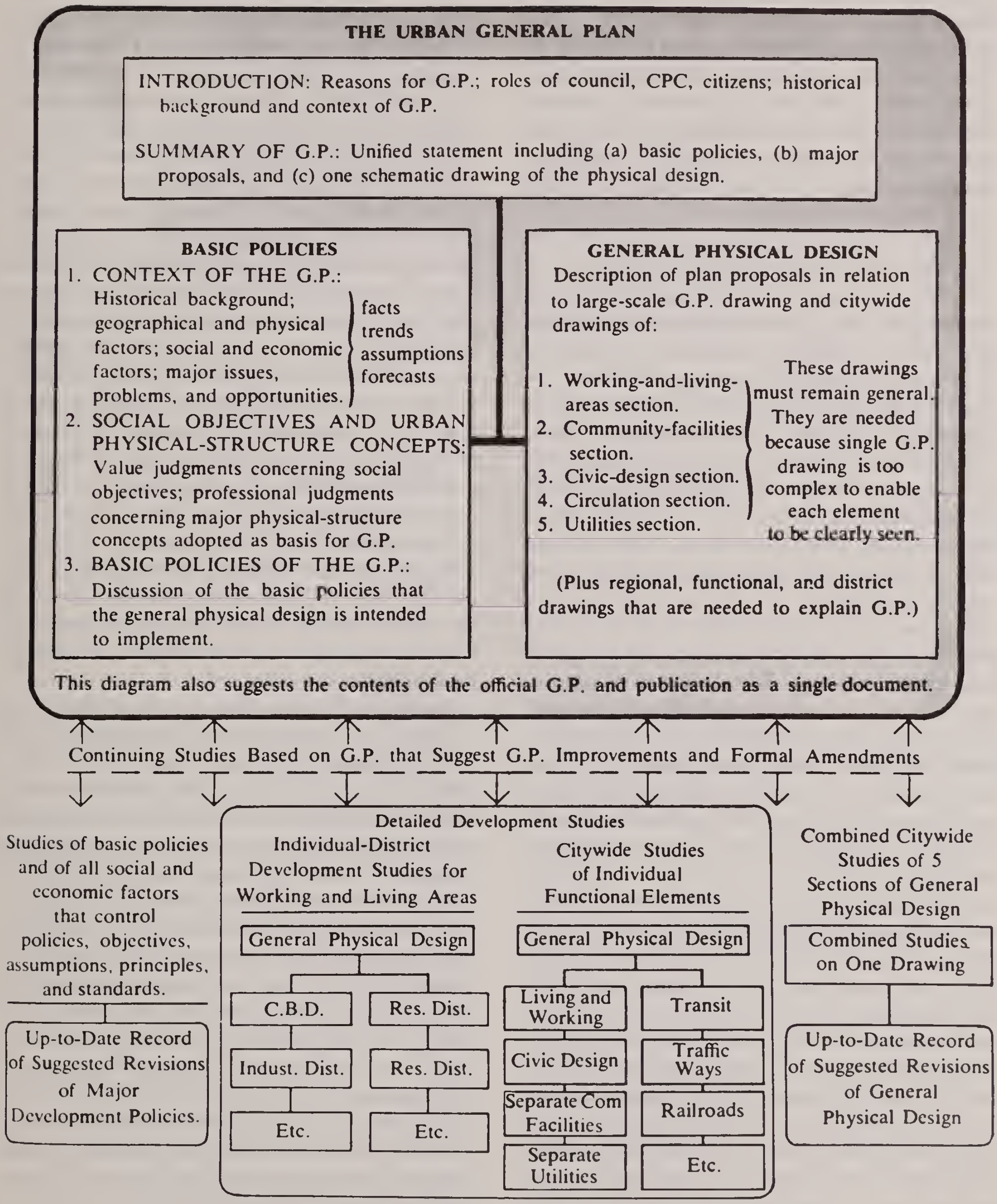

THE URBAN GENERAL PLAN
INTRODUCTION: Reasons for G.P.; roles of council, CPC, citizens; historical background and context of G.P.
SUMMARY OF G.P.: Unified statement including (a) basic policies, (b) major proposals, and (c) one schematic drawing of the physical design.
BASIC POLICIES
1. CONTEXT OF THE G.P.:
Historical background; geographical and physical factors; social and economic factors; major issues, problems, and opportunities.
facts
trends
assumptions
forecasts
2. SOCIAL OBJECTIVES AND URBAN PHYSICAL-STRUCTURE CONCEPTS:
Value judgments concerning social objectives; professional judgments concerning major physical-structure concepts adopted as basis for G.P.
3. BASIC POLICIES OF THE G.P.:
Discussion of the basic policies that the general physical design is intended to implement.
GENERAL PHYSICAL DESIGN
Description of plan proposals in relation to large-scale G.P. drawing and citywide drawings of:
1. Working-and-living-areas section.
2. Community-facilities section.
3. Civic-design section.
4. Circulation section.
5. Utilities section.
These drawings must remain general. They are needed because single G.P. drawing is too complex to enable each element to be clearly seen.
(Plus regional, functional, and district drawings that are needed to explain G.P.)
This diagram also suggests the contents of the official G.P. and publication as a single document.
Continuing Studies Based on G.P. that Suggest G.P. Improvements and Formal Amendments
Studies of basic policies and of all social and economic factors that control policies, objectives, assumptions, principles, and standards.
Up-to-Date Record of Suggested Revisions of Major Development Policies.
Detailed Development Studies
Individual-District Development Studies for Working and Living Areas
General Physical Design
C.B.D.
Res. Dist.
Indust. Dist.
Res. Dist.
Etc.
Etc.
Citywide Studies of Individual Functional Elements
General Physical Design
Living and Working
Transit
Civic Design
Traffic Ways
Separate Com Facilities
Railroads
Separate Utilities
Etc.
Combined Citywide Studies of 5 Sections of General Physical Design
Combined Studies on One Drawing
Up-to-Date Record of Suggested Revisions of General Physical Design

Figure 13–1. *The urban general plan*

development of the community. It is from the use of the plan, and not the mere fact of its existence, that the benefits flow. Thus, the old distinction between "plan" and "process" is no longer relevant; the plan is meant to be part of a process. The functions are grouped here under broad categories of plan-users; because the legislative body is identified by the author as the principal client of the plan, the functions pertaining to it are discussed in more detail than for the others.

FUNCTIONS FOR THE LEGISLATIVE BODY

Policy determination. Through the comprehensive plan, the legislative body considers and agrees upon a coherent, unified set of general, long-range policies for the physical development of the community. The plan draws the legislators' attention to the community's major development problems and opportunities. It gives them a chance to back off from their preoccupation with pressing, day-to-day issues and to clarify their ideas on the kind of community they are trying to create by their many specific decisions.

Because of the unavoidable need for a "big picture" to coordinate decision making, legislators often develop tacit, unwritten policies about how the community should develop. The comprehensive plan should bring such implicit policies into the open to assure that they are determined through democratic processes. Such disclosure places these policies on record and fixes responsibility for them on the legislative body.

Policy determination covers everything from the realization that a policy is needed to the final decision on what the policy shall be. Often the early steps in the process are made by the legislative body's advisors, in this case, the planners. The final decision, though, should be made by the legislators. It would also be desirable for legislators to participate more in the early steps of formulating proposals and comparing alternatives. They should be drawn into the early stages of plan preparation and not kept in the dark until the staff has a finished package ready for them to approve or veto. Unfortunately, the latter is often the practice.

Policy determination takes place at several points in time, namely: during preparation, debate, and initial adoption of the plan; during annual review and amendment of the plan; during major reconsideration of the entire plan after five to 10 years; and during consideration of day-to-day development matters which call for review of general, long-range policies.

When the plan is adopted, it should represent the policies of the legislators; they must feel committed to it and be ready to follow its policies in their future actions. To accomplish this requires a long period of debate and education between the first presentation of the plan in tentative form and ultimate adoption in revised form. During this period, the legislators should study the proposed plan carefully, devote work sessions to it, and conduct hearings on it. This period should also be utilized to distribute the proposed plan to citizens, newspapers, and civic groups and to solicit public reactions to it.

It is a mistake for the planners to press for quick adoption of the plan. If the legislators do not feel that the plan is truly theirs, they will not feel bound by it and will readily ignore it when it suits them. This mistake will come back to haunt the planners.

Adoption of the plan by the legislative body is meant to be more than a formality. It is intended to give some assurance that the plan does represent the views of the legislative body. The crucial question is not whether the legislative body takes the formal step of adopting the plan, but whether the plan actually embodies the policies of the legislative body.

As conditions in the community change and new problems come to the forefront, the legislative body will have to modify some of its policies. Topics skimmed over in the original version of the plan will require fuller treatment. New information that becomes available, perhaps as the result of staff studies, will call for revisions in the plan. The membership of the legislative body will also change, and the plan should always reflect the policies of the legislative body currently in office.

Annual review and amendment is a formal procedure intended to encourage keeping the plan up to date. It requires the legislators to look over the plan once a year and to decide whether any of the long-range policies should be modified in the light of events that have transpired during the previous year. It also serves to refresh the legislators about the provisions of the plan and to educate any newcomers on the legislative body about the plan.

The entire plan should receive a thorough overhaul five to 10 years after initial adoption (and at similar intervals thereafter). This should be an effort comparable to that entailed in the original preparation of the plan. This is needed because some long-range trends will not be discernible in the issues which arise from week to week, or even at annual review time. Amendments to the plan will tend to reflect rather specific current issues. From time to time, the planners and policy-makers should step back and rethink fundamentals.

Besides these regularly scheduled reviews, the plan may be amended at any time. When a major issue comes before the legislators for decision, they should consult the pertinent policies of the plan and retrace the thinking that led to the policies. Normally they will reaffirm the policies, but if they should decide to change the policies, the plan should be amended. This is a kind of feedback by which plan policies are tested in the heat of battle, and are either upheld or modified.

Policy effectuation. The comprehensive plan enables the legislative body to make decisions on the specific development matters which come up every week on the basis of a clearly stated, unified set of general, long-range policies which have been previously thought out and adopted. Thus current issues are viewed against a clear picture of what has been deemed to be the desirable future development of the community. The plan serves as a practical working guide to the legislators in making everyday decisions.

It is in the exercise or lack of exercise of the policy effectuation function that most plans succeed or fail. The plan that is adopted and then put on the shelf to gather dust has become a symbol of futility to city planners. Another common failing is the discrepancy that may develop between the comprehensive plan and the zoning ordinance. These are instances in which the policy effectuation function has been neglected. To be effective, the plan must be brought to bear on the development decisions made by the legislative body at every meeting.

In performing this function, the legislative body needs the assistance of its advisors, especially the planning staff and planning commission. They should be charged with the preliminary study of current development proposals to see how these relate to the comprehensive plan. While this is sometimes accomplished on an informal, voluntary basis, it is best that it be required through a mandatory procedure of regular referral. Such a procedure requires a planning commission report on all physical development matters that come before the legislative body for action. However, this report should be purely advisory; it is not desirable to hamstring the legislative body by requiring a greater-than-majority vote to overturn a commission recommendation.

The types of specific physical development matters which require action by the legislative body can be divided into two categories: (1) those measures which are specifically designed to implement the comprehensive plan, and (2) other matters which routinely require legislative approval and should be viewed in light of the comprehensive plan.

Examples of the first category are the zoning ordinance, subdivision regulations, the official map, the capital improvements program and budget, and development plans. These instruments are drawn up by the planning staff, approved by the planning commission, and forwarded to the legislative body for its action. There is no question of regular referral for these matters, since they originate in the planning department.

Examples of the second category include rezoning cases, use permit and variance applications, subdivision plats, street closings, site acquisitions, and public works projects. These items constitute the day-to-day business of city planning. Usually they do not originate from the planning staff, but from private developers, other departments in city hall, or other public agencies. Some of these things normally pass through the planning department on their way to the legislative body, or to other boards, but some ordinarily do not and so require referral.

Clearly the comprehensive plan should be a guide to the legislative body in passing on the control instruments in the first category. For matters in the second category, the plan should at least be consulted for an understanding of the context surrounding the particular issue, but it is possible that the plan will not unequivocally indicate what action to take. Admittedly, the comprehensive plan will not answer all the small questions which come before the legislative body. It is not supposed to; it is not intended to be a zoning map or a blueprint.

The remedy to this problem is the development plan, which is based on the comprehensive plan and attempts to specify the detailed development pattern for a particular area or a particular function. If there is an adopted development plan covering the current issue, it should indicate the proper decision for the legislative body to make. In general, all of the control instruments in the first category are intended to mediate between the comprehensive plan and more detailed physical development issues.

The successful operation of the policy effectuation function will be difficult to achieve, but it is crucial that it be achieved. It will require diligence by the planning director. Legislators may tend to overlook the comprehensive plan unless they are reminded. In time, if they are induced to use the plan and find it helpful in the conduct of their week-to-week business, they will learn to rely on it.

The policy effectuation function should be the most appealing to legislators. It is the function which should be most useful to them in the regular conduct of their duties. It focuses on current tangible issues, which supposedly hold the major interest of legislators. If it is followed, the plan justifies the actions of the legislators to the public, and makes it easier for them to resist the pressures of special interest groups.

Communication. Through the comprehensive plan, the legislative body presents a unified picture of its long-range, general policies to the other persons concerned with development of the community. These include the planning commission and staff, the chief executive, other municipal departments, other public agencies, private developers, civic organizations, and the general public.

The plan enables the public and private interests engaged in development to anticipate decisions of the legislative body. They can relate specific projects to the comprehensive plan during the early study phases, before the proposals are submitted to the legislative body for approval. Government officials can use the plan as a guide to administrative decisions. The communication function cannot operate effectively unless the comprehensive plan represents the policies of the legislative body. If it represents policies from another source, then it will be little help in anticipating the actions of the legislators.

Through the communication function, the plan acts as a positive force. It persuades private developers and suggests development projects to them. Many development proposals never require legislative action—the implementation of a land use pattern which already conforms to zoning, for example. In these cases, the plan still serves an important function for the legislative body by communicating its policies, even though the legislators may not be aware of it.

Once the plan is adopted and published, the legislators themselves are not actively engaged in this function; the plan document does it for them. Nonetheless, the plan is of tremendous benefit to them. It saves them time by screening out proposals which would conflict with their stated policies. The plan is the basis for many programs and activities of the administrative staff which are aimed at effectuating the legislators' policies. The planning staff, for example, prepares a zoning ordinance based upon the land use policies expressed in the plan.

The success of the communication function requires wide distribution and understanding of the comprehensive plan. The plan should be published and made available free of charge. It should be written and designed so that it will be attractive and comprehensible to the average citizen.

The necessity for communication means that while the plan must be primarily adapted to the needs of the legislative body, it must also be suited to the needs of those to whom the legislature wishes to communicate its policies. There need not be any serious conflict here. As long as the comprehensive plan is considered to be the repository of only general, long-range policies, then the same kind of document should satisfy the needs of all users of the plan. Where the municipal staff and private developers require more detailed guides, the comprehensive plan will not prove adequate. For this, supplementary documents and implementary regulations are needed.

The communication process provides a test of public acceptance of the plan. A plan that is meaningless or displeasing to the citizens will not get much support and will not have much influence on development. Such reactions eventually will get back to the legislators. Thus, the communication function provides a stimulus for citizen participation in the planning process.

Conveyance of advice. The comprehensive plan provides an opportunity for the legislative body to receive the counsel of its advisors in a coherent, unified form which assists the legislators in determining and effectuating general, long-range development policies. The principal advisors involved are the planning staff, the planning commission, and, in the council-manager form, the chief executive.

The comprehensive plan is the major instrument by which the planning commission and staff present their findings and recommendations to the legislative body. Through the plan, they first call attention to the development problems facing the community and then propose solutions. The plan enables them to offer their advice in a studied, comprehensive form, rather than on a piecemeal, *ad hoc* basis.

It has been argued that it is really the planning staff which formulates the plan, and therefore it is really the staff's plan. It is true that planners contribute the bulk of the thought and effort which go into preparing a comprehensive plan. Professional planners have probably been involved in the preparation of every comprehensive plan; a group of laymen cannot do it unaided. But the planners should prepare the plan for the legislative body, not for themselves.

Usually the first version of the plan represents primarily the thinking of the planning staff. This is proper, although it would be better if legislators could participate more in the early stages of plan preparation. As the preliminary plan goes through the long period of study and debate leading to adoption, the plan is shaped more and more to the legislative will, and it becomes less and less the staff's plan. This process continues after adoption, as the legislators learn about the plan through using it, and modify it through amendments.

The planner may propose policies through the comprehensive plan, but he should do so consciously and openly, not through oversight or subterfuge. He should explain the plan fully to the legislators, but he should not push it as a salesman. Unfortunately, "selling" is a common approach to plan presentation. No doubt this is analogous to the accepted step by which the architect sells his design proposal to his client.

The planner-legislator relationship is not the same as the architect-client relationship. The planner is a continuing advisor and aide of the legislative body who is rewarded for his services, rather than his product. The pay-off for the planner is not adoption of the plan, but what the legislative body does with the plan over the years to improve the physical environment of the community.

The advisory function continues after adoption of the plan. It operates whenever the staff and commission recommend amendments to the plan to the legislative body. The comprehensive plan is a key instrument for advising the legislative body on specific current questions. Regular referral gives the planners an opportunity to explain to the legislators how a particular matter relates to the plan. The plan should make it easier for the planning director to put across his recommendations.

The advisory function highlights the significant role of the professional planner. Experience has shown that the proper functioning of a comprehensive plan is impossible without the constant counsel of a professional planner (either a staff member or a consultant). No legislative body is equipped or educated sufficiently to carry on effectively without assistance or with only the assistance of laymen.

The emphasis on policy is not meant to detract from the importance of technical knowledge. Every policy should have a firm basis in technical fact and professional judgment. It is the job of the professional planner to make sure that this occurs. He must attempt to convince the legislators of the applicability of his findings and the merit of his recommendations. This will require that he present his advice in a form which the legislators can readily comprehend. He must learn to express the complexities and nuances of planning in terms which laymen can grasp.

It must be acknowledged that the planning commission and staff are more than merely passive advisors to the legislative body. They offer ideas, they initiate proposals, they point out problems, they actively attempt to influence the legislators. This is one reason why there is an administrative branch of government to help the legislative branch. These activities by the planners should be conducted openly and with a sense of respect for the powers that rightfully inhere in the legislative body. In the end, it is the legislators who decide whether the ideas of the planners are to be carried out.

Education. The comprehensive plan has educational value for the legislators and for anyone who reads and uses it. It arouses interest in community affairs, offers people factual information on present conditions in the community and probable future trends, awakens them to the possibilities of the future, tells them something about the operations of their local government, and imparts some of the ideas of city planning.

While the education function is allied to the communication function, it is much broader. The plan does more than just communicate the legislature's adopted policies. In fact, it provides the context by which citizens can decide whether or not they agree with the legislature's policies. It offers a wealth of background material which can be interesting and useful. It promotes citizen participation in local government.

The plan should be inspirational as well as informative. This does not mean that it should depict a utopia, but that it should point out some of the realistic possibilities for improving the community and creating a more desirable physical environment. The plan should indicate a positive attitude towards the prospects for progress, rather than resignation to extension of current trends. This also does not mean that the plan should be presented like a Sunday supplement or a promotion brochure. It should be written and designed so as to indicate that it is a sober working document to be used by practical men.

The legislators are perhaps the major beneficiaries of the educational impact of the plan. The entire process of studying, debating, adopting, using, and revising a plan constitutes a kind of in-service training in city planning, as well as in local government in general. The planning director should continually use the plan as a basis for educating the legislators. A brief "refresher course" on the main points of the plan at annual review time can be valuable.

One important facet of this process is that the legislators learn the reactions and opinions of their constituents. Dissemination of the plan document will bring responses from civic organizations, newspapers, and individual citizens. Public hearings on the plan give the legislators an opportunity to hear from the people they represent. The comprehensive plan can improve communication between legislators and voters.

The educational value of the plan is greatest during the period of deliberation over the preliminary plan which is proposed by the planning commission. If the plan is hastily skimmed and quickly approved, the potential educational advantages will be lost. Sometimes public response to the initial presentation of a plan is disappointing. There may be apathy in the community which is difficult to overcome. Education is a continuing responsibility of the planner, and sometimes it requires years of patient effort to produce palpable results.

The Functions for Other Users of the Plan

The Chief Executive. The specific ways in which the chief executive will use the comprehensive plan will depend on whether he is an elected mayor or an appointed city manager. But in either case, he will be deeply involved in planning matters, and the comprehensive plan should be a valuable instrument for him.

The policy determination and policy effectuation functions pertain to the chief executive—for the strong mayor, because he is a policy-maker, and for the city manager, because he is the principal advisor of the legislators in formulating policies. The communication and advisory functions will operate in slightly different ways under the two forms of government. The strong mayor will receive staff advice through the plan and communicate the policies agreed on by him and the legislative body through it. The city manager will use the plan in giving advice to the legislative body and will interpret their policies from it. The education function applies under either form.

In addition, the chief executive uses the comprehensive plan as a basis for implementation programs. The plan itself does not contain a detailed outline for effectuation, but its proposals imply that certain implementing steps, particularly public works, should be undertaken by the administration. Much of the responsibility for effectuating the plan falls on the shoulders of the chief executive.

The chief executive is the central coordinator of all the activities of the government, and the plan provides a framework to assist him in coordinating those activities involving physical development, especially capital improvements. Because the plan is general, however, it will not suffice to coordinate all the details of the city's physical plant. For this the chief executive will need supplementary instruments, which might take the form of administrative programs, priority lists, and budgets, or of such standard implementing devices as development plans and the capital improvements program. The preparation of such items is a logical follow-up to adoption of a plan.

The Planning Commission and Staff. The most important function of the comprehensive plan for the planners is conveying their advice to the legislative body. The plan is the key instrument by which they present their most important recommendations. This is particularly true of the initial version of the plan prepared by the staff and forwarded by the planning commission to the legislative body. It also holds for proposed amendments and for recommendations on everyday matters on which the plan has some bearing.

The communication and education functions are also of great value to the planners. It is helpful to them to be able to put a clear, printed statement of the legislative body's policies in the hands of developers, lawyers, other public officials, and ordinary citizens. It illustrates to these people what city planning is all about.

The planning commission and staff also use the plan as a basis for implementation programs. It is their job to prepare and administer many of the measures specifically designed to carry out the plan—the zoning ordinance, subdivision control, urban renewal, development plans, and so on. Since the comprehensive plan itself is not legally binding on anyone, it is essential that the necessary legislation be prepared, adopted and enforced to transform the general policies into regulations and actions which do have legal substance.

The comprehensive plan also helps the planning staff by giving some focus and purpose to its research and design activities. Instead of drifting through a series of unrelated studies, the work of the planning agency is channeled toward a definite goal. The plan is a tangible product which will give the staff the satisfaction of accomplishment. The plan also serves the staff as a vehicle for exploration, especially during the early stages of drafting the original plan, but also after adoption, when new ideas are tested by fitting them into the context of the plan.

Operating Agencies. Physical development is a prime concern of many of the line departments of the municipal government—for example, public works, urban renewal, parks and recreation, building inspection, and utilities. Occasionally other departments, such as police, fire, and library, will be concerned with sites and physical facilities. There are often other local public agencies outside of the main city government, such as the school board and special purpose districts, which are involved in physical development. The comprehensive plan can be of value to all these agencies.

The comprehensive plan gives these agencies a context into which each one can fit its own plans and programs. Coordination among the various public activities will be enhanced, so that all should be working toward the same vision of the desirable future form of the city. Of course, the plan may not be sufficient for detailed coordination, and reference to supplementary documents may be required.

Many employees of operating agencies are specialists whose training and experience predispose them to take a narrow viewpoint and to ignore the work of other agencies. The comprehensive plan should promote a broader perspective by making them aware of the interdependence of all the aspects of community development. It shows them how the operations of their agency fit into a comprehensive scheme for improving the community.

For many operating agencies, the comprehensive plan will also provide essential information and data which are needed in planning specific projects. The long-range forecasts contained in the plan may be especially helpful. While this function is important, the comprehensive plan should never be distorted into a statistical compendium.

The communication and education functions also apply to the operating agencies.

The Public. The public which uses the comprehensive plan is a heterogeneous group —realtors, builders, businessmen, industrial executives, chambers of commerce, taxpayers' groups, property owners, and ordinary citizens. The comprehensive plan serves several functions for this varied audience.

The plan represents a formal, published report to the people on the development policies adopted by the legislative body. This should be a welcome addition to the few channels of communication existing between the legislators and their constituents. The plan is unique in being a studied, comprehensive statement of policies in one entire area of local affairs.

The plan ought to have great educational value for the public. It promotes public understanding of the community, government, the legislators, and city planning. It is important that the plan document be drafted with an eye to its educational function, so that it will be instructive and self-explanatory.

The comprehensive plan helps to stimulate citizen participation in local government. The process of preparing and using a plan offers many opportunities for citizens to express their views and to contribute to the formulation of the community's policies. This is especially important during the period when the legislative body is debating the plan prior to adoption.

The plan gives the voters a means of evaluating the legislators, since it is a clear, definite record of their development policies. It also provides a device for keeping check on the legislative body. Any citizen can consult the plan to see whether particular actions of the legislators conform to their long-range policies. Thus it deters the legislators from taking arbitrary or capricious actions. On the other hand, it makes it easier for them to resist pressures and take actions which are in line with the plan.

The comprehensive plan might also provide subject matter for the campaign platforms of local political parties. Physical development matters have sometimes been major campaign issues in local elections. It would be appropriate for a party to advocate amendments to the plan. This means the plan might be changed considerably when a new group takes control of the legislative body. The plan should be amended under such conditions, to keep it in line with the policies of the current ruling group in the legislative body.

The comprehensive plan can serve as a guide to development decisions made in the private sector of the economy. It is probably the best available forecast of the community's future. Private developers can fit their projects into a city-wide context and coordinate them with public development proposals. This kind of private effectuation of the plan is largely voluntary, but the plan is apt to have a persuasive influence. Private developments often require approval of the legislative body at some time, and a developer is better off if his project conforms to the comprehensive plan.

Other Functions. A few miscellaneous functions which do not fit under the previous headings are grouped here.

The comprehensive plan can be a guide for the courts when they are required to rule on implementary legislation or actions which were intended to carry out the plan. Legislative acts which conform to a plan are more likely to be upheld than those which vary from a plan or are not based on any plan at all. Comprehensive plans have often been used in this way, and the demands of the courts have exerted a strong pressure for communities to prepare plans.

The comprehensive plan has increasingly been a prerequisite for federal financial aid. Since the 1954 Housing Act required cities to undertake comprehensive plans before they could receive urban renewal assistance, there has been a flurry of plan-making in hundreds of cities. Now other types of federal aid are also tied to the local comprehensive plan. Occasionally this has been the primary motivation for preparing the plan. It is regrettably true that in some cases hastily-drawn plans have been adopted with scarcely a second look and then filed away. Token plans of this sort are damaging to city planning. On the other hand, the federal requirements have awakened a genuine interest in planning in many places and have resulted in some fine plans.

The comprehensive plan can be helpful in securing coordination between autonomous public agencies. It offers a medium for negotiation, a meeting ground on which compromises can be effected and recorded.

Sometimes the comprehensive plan is used for civic promotion. Legislators want something to show their constituents and colleagues from other cities. Chambers of commerce want a publication to distribute to industrial and business prospects. While promotion is a legitimate activity of city officials and civic boosters, this function should be strictly incidental.

Procedures for Preparing and Using the Plan

Basic Requirements as to Procedure

The reader will by now have a general idea of how the plan is formulated and utilized. This section merely recapitulates the recommended procedures in chronological order. Local circumstances, varying state enabling acts, and the desire to experiment may justify some variation in procedures; there is no intention of being doctrinaire. Nevertheless, the conception of the comprehensive plan advocated here dictates six basic requirements as to procedure:

1. There should be only one official comprehensive plan. People other than the legislative body do have different needs for a plan, but the confusion and inefficiency that would result from multiple plans offset the possible advantages. Supplementary documents can be prepared to meet the special needs of these people, such as the chief executive, planning commission, and planning staff.

2. The plan should be formally adopted by the legislative body. This fixes responsibility for the plan's policies on the legislature and makes it clear whose plan it is. The legislators will tend to take the plan more seriously, which will enhance the prestige of the plan. It gives a desired degree of stability to the plan, so that it is not changed promiscuously. However, adoption should be more than a perfunctory gesture.

3. There should be a lengthy period of public debate prior to adoption. Considerable time will be needed for the legislators to become familiar with the plan, and for it to be modified in accordance with their views. This period provides opportunity for citizen participation. There should be a full presentation of the proposed plan, followed by wide public distribution and exposure of the legislators to citizens' reactions.

4. The plan should be available and understandable to the public. It should be published and furnished to anyone who requests it, preferably free of charge. The plan should be complete and self-explanatory, while still being as concise, interesting, and attractive as possible. It should not be abstruse, but should be comprehensible to the average citizen.

5. The plan should be formulated so as to capitalize on its educational potential. It will be an introduction to city planning for many readers. There should be an explanation of

what the plan is and how it should be used. The plan should try to correct prevalent misconceptions about the aims of planning and the roles of the planning commission and staff. The relationship of the plan to implementing legislation and detailed development studies should be clarified.

6. The plan should be amendable. It must reflect the current development policies of the legislative body at all times, and anything that tends to stagnate it will seriously diminish its utility. The procedures for keeping the plan up to date should be specified in the plan and made a formal part of government routine.

An Outline of Procedure

It is presumed that any comprehensive plan effort would start with a go-ahead from the legislative body. Since the plan is to be prepared for adoption and use by the legislature. it would be unwise for a planning director to undertake preparation of a plan without the knowledge of the legislators. Since considerable staff time and expense will be required, there may be budgetary questions. Normally staff members will have to be hired or freed from other duties to devote full time to plan preparation. Once this approval has been granted, the subsequent phases would be:

1. Preparation of the preliminary version of the plan by the planning staff and commission. Usually the initial work will be performed by the planning staff, which from time to time will present findings, proposals, and progress reports to the planning commission. It would be desirable to involve the legislators as well at an early point, at least on an informal basis. This might be accomplished by asking them to consider a statement of community goals, or by presenting some fundamental alternatives for discussion at a work session.

It would also be wise to involve citizens at an early point. Publicity should be given out from time to time. In some places an *ad hoc* citizens' committee is formed to give the planners another sounding board and to communicate their ideas better to the public. Sometimes briefing sessions are held in different parts of the community, or with organizations who are especially concerned with physical development of the community.

After the planning staff has completed its studies and settled on the preferred plan, it should present this to the planning commission. Following a period of discussion, during which adjustments would probably be made, the commission should approve the preliminary plan and recommend it to the legislative body. State law or the city charter may require the commission to hold public hearings on the plan, but the major hearings should be reserved for the legislative body.

2. Presentation of the preliminary plan to the legislative body. This constitutes an opportunity to draw public attention to the plan, perhaps by an oral presentation illustrated with slides. The legislature should take no action on the plan at the initial presentation, but might establish the period for debate.

It is customary to have copies of the preliminary plan printed at this time and ready for public distribution. However, often this turns out to be a polished, expensive publication which has a look of finality about it. When so much money is put into the preliminary plan, there is a tacit hope that the legislative body will not make many changes before adopting the plan. This is an improper approach. There must be a printed version of the preliminary plan for public distribution, but it should be a simple, unpretentious, inexpensive publication—something that has the look of being subject to revision.

3. A lengthy period of debate by the legislators and public. Probably the ideal time for this is six months to a year, but in some communities it has stretched out for two years. Formal public hearings ought to be scheduled toward the conclusion of this period.

During this time, the legislators should become familiar with the contents of the proposed plan. Work sessions might be held with the planning director or planning commission. As the legislators continue about their regular business, they will be exposed to the relevance of the plan to current issues.

Strenuous efforts should be made to attract public attention to the plan and to disseminate information on its proposals. Besides distribution of the preliminary plan document, other common means of public information should be utilized. Citizens' reactions to the plan should be solicited and noted.

The object of this period of debate is not to "sell" the plan, but to improve it and make it more responsive to the wishes of the legislative body and the community. It is to be expected that the legislators will consider changes and perhaps request the planning staff to make additional studies.

4. Adoption of the plan by the legislative body. This step is important because it causes the legislators to take the plan seriously. They will not care to sign their names if they are not familiar with the plan and generally in agreement with it. For those who use the plan, this step helps to make clear that it is the official plan representing the policies of the legislative body (Figure 13–2).

Since the comprehensive plan is not legislation, it is normally adopted by resolution. A resolution is a good place to explain briefly

ADOPTING THE BERKELEY MASTER PLAN, PROVIDING FOR THE ANNUAL REVIEW THEREOF, AND PROVIDING FOR THE INTEGRATION OF THE CAPITAL IMPROVEMENT PROGRAM AND THE PHYSICAL DEVELOPMENT OF THE CITY THEREWITH.

BE IT RESOLVED by the Council of the City of Berkeley as follows:

WHEREAS, the Planning Commission of the City of Berkeley after careful study and after two public hearings has recommended to this council a master plan for the City of Berkeley; and

WHEREAS, this Council has carefully considered the master plan and has held a public hearing thereon and finds that said plan constitutes a suitable, logical, and timely plan for the future development of the City of Berkeley over the ensuing twenty-five years.

NOW, THEREFORE, Be it Resolved, that the document consisting of text, maps, and charts, entitled "Berkeley Master Plan" and dated 1955, is hereby adopted as the Master Plan of the City of Berkeley in accordance with Section 1 of Ordinance No. 3403 N.S.

RESOLVED, FURTHER, that in order that the Master Plan shall at all times be current with the needs of the City of Berkeley, and shall represent the best thinking of the Council, Planning Commission, and boards, commissions and departments of the City in the light of changing conditions, the Planning Commission shall annually review the Master Plan and recommend to the Council extensions, changes, or additions to the Plan which the Commission considers necessary. Should the Commission find that no changes are necessary, this finding shall be reported to the Council. This review procedure should be timed so that any necessary amendments to the Master Plan may be adopted by the Council prior to the commencement of the formulation of the Capital Improvement Program.

RESOLVED, FURTHER, that the Master Plan shall be the guide for the Capital Improvement Program insofar as said Capital Improvement Program affects the physical development of the City. The Planning Commission shall submit an annual report to the Council regarding the Capital Improvement Program, which shall review each project for its conformity to the Master Plan; review the program as a whole in order to suggest any improvement in economy or efficiency which might be effected through the combining of various projects; and suggest any needed improvements which do not appear in the program.

RESOLVED, FURTHER, that all matters affecting the physical development of the City shall be submitted to the Planning Commission for a report to the City Council as to conformity to the Master Plan. Such report shall be made to the Council within thirty (30) days after presentation of the matter to the Planning Commission, provided that said time may be extended by the Council. If said report is not submitted to the Council within said thirty (30) day period, or any extension thereof, the matter shall be deemed approved by said Planning Commission.

Adopted April 12, 1955

FIGURE 13–2. *Resolution of adoption, master plan, Berkeley, California*

what the plan is and how it will be used, and to make the point that it is the legislature's plan. The resolution should also spell out the formal procedures to be used in keeping the plan current.

5. Publication and distribution of the final, adopted version of the plan. Here the object is not so much to solicit public reaction as to communicate the legislative body's adopted policies to the public, and particularly to those persons involved in physical development of the community. At this point it is appropriate for the plan document to have a finished look, although of course the probability of future amendments should be indicated. As time goes by, there will be a continual stream of requests for the plan from developers, civic groups, teachers, and interested citizens.

6. Annual review of the plan. Once a year the legislators should reexamine the plan and consider possible amendments. They should reconstruct the thinking which led to the main ideas of the plan. This will not only keep the policies fresh in their minds, but will introduce the plan to new members of the legislature. Normally the planning staff would initiate proposals for amendments, which would be screened by the planning commission and then forwarded to the legislators.

There should be a regular time of year for annual review, so that it will become routine and will not be overlooked. It might best be scheduled just prior to the annual hearings on the capital improvements budget. This not only fixes a date, but means that the plan will be fresh in the legislator's minds when they are considering specific improvements.

The importance of annual review cannot be overemphasized. This is the main process which is intended to assure that the plan will be kept up to date. If it is neglected, there is danger that the plan will "ossify" and be ignored. Annual review is a fairly recent innovation; it was not practiced during the days of the much-criticized "one-shot plans." Several municipalities now have had some years of experience with annual review, and it seems to be a fairly effective procedure.

7. Major reconsideration of the entire plan after five to ten years. This should provide for an overhaul of the whole plan, including new surveys, updated forecasts, and the restudy of major alternatives. The target date for the plan, if one is specified, should be pushed further into the future. The effort expended should be similar to that put into the original plan, and the same general procedures should be followed, including a period of debate before adoption. A new plan document should be published, and the old one retired.

The rationale behind this step is that amendments made at annual review time will not suffice to keep the plan current over an extended span of years. Gradual changes may be imperceptible unless they are compared with the situation a decade before. To illustrate, during the 1950s many communities based their plans on the assumption that population would increase. The 1960 census showed, to the surprise of most planners, that in many central cities the population had begun to decline.

8. Amendment of the plan at any time. Specification of an annual review procedure is not meant to preclude amendments at other times. In the normal course of using the plan as a guide for decisions on current development issues, the legislators will become aware of provisions which seem unworkable or even undesirable. It is inevitable that they will not be fully aware of all the plan's implications when they adopt it. Possibly they may want to modify some policies in view of new developments (such as a major new industry which was not anticipated). When these things occur, the plan should be amended immediately; every effort should be made to keep it current with the legislative body's thinking.

SPECIAL TOPICS

The Interim Plan. A considerable length of time is required to prepare a comprehensive plan, especially if major surveys must be conducted. The necessary period will vary with the size of the community and the staff available, but a period of one or two years is common. In large cities, this may lengthen to five years.

Occasionally there is an urgent desire to get some kind of plan as soon as possible, so an "interim plan" is quickly prepared, pending completion of a more exhaustive plan. Usually the interim plan consists mainly of a schematic design and a written statement of very general policies.

The preparation of an interim plan seems to be an acceptable procedure, although not necessarily something to be encouraged. There is apt to be some confusion among the interim plan, the tentative final plan, and the adopted final plan. Certainly it is better to make a rough overall plan than to revert to piecemeal planning. The major danger of the interim plan is that the community will not proceed with the more complete version of the plan.

The Role of the Consultant. The discussion up to this point has been based on the implicit assumption that the plan is prepared by the community's full-time planning staff. In point of fact, private planning consultants prepare a large portion of comprehensive plans. In the past, the consultant was often depicted as a villain who blew into town with a flashy plan (not too different from the one he previously did for a neighboring city), collected his fee, and left for parts unknown. The modern consultant is more responsible and enlightened. He tries to get the community started on a continuing planning process, and sometimes provides continuing counsel for a retainer.

In principle, it is preferable to have the plan prepared by the community's own staff, if possible. Consultants are generally used in two situations: when the community cannot afford a full-time staff or when the staff is too overloaded with other work to spare time for plan preparation. Under these conditions, there is no reason not to hire a consultant to draw up the comprehensive plan. The consultant should attempt to fill the role of a local staff as much as it can, working with elements in the community, and should recognize the legislative body as its principal client.

Implementing Legislation. In theory, preparation and adoption of a comprehensive plan should be the initial step in a planning program, and should be followed by formulation of the implementary documents which are supposed to be based on the plan. In practice, such legislation as the zoning ordinance and subdivision regulations often exists before the plan is started. In this event, adoption of the plan calls for a wholesale review of these documents to make sure that they really do effectuate the comprehensive plan.

The Comprehensive Plan Document

Basic Requirements as to Subject Matter

The discussion now devolves to a concrete level, focusing on what the published plan document looks like and contains. It is not intended to prescribe exactly the composition of the plan document; the comments here should be regarded as suggestions. They do not have the cogency of the conceptual propositions advanced earlier. While there is some latitude for experimentation, there are six basic requirements which the plan document should fulfill. These have been discussed previously, and are brought together for brief mention here.

1. The plan should be comprehensive.
2. The plan should be long-range.
3. The plan should be general.
4. The plan should focus on physical development.
5. The plan should relate physical design proposals to community goals and social and economic policies.
6. The plan should be first a policy instrument, and only second a technical instrument.

Overall Form

The comprehensive plan should be completely contained in a single, published document, which should include a large drawing showing the general physical design proposed for the entire community, written text, and whatever maps, illustrations, and tables are needed to support the text. Often the large drawing is folded and put in a pocket inside the back cover. The plan should be easy to read and use, and inexpensive enough so it can be widely distributed (without charge, if possible). The document should be designed so that it is attractive and written so that it is interesting. It should not look forbidding or ponderous.

It helps if the plan is of convenient size, perhaps 8½ by 11 inches. Some plans tend to be large and bulky, which makes them hard to

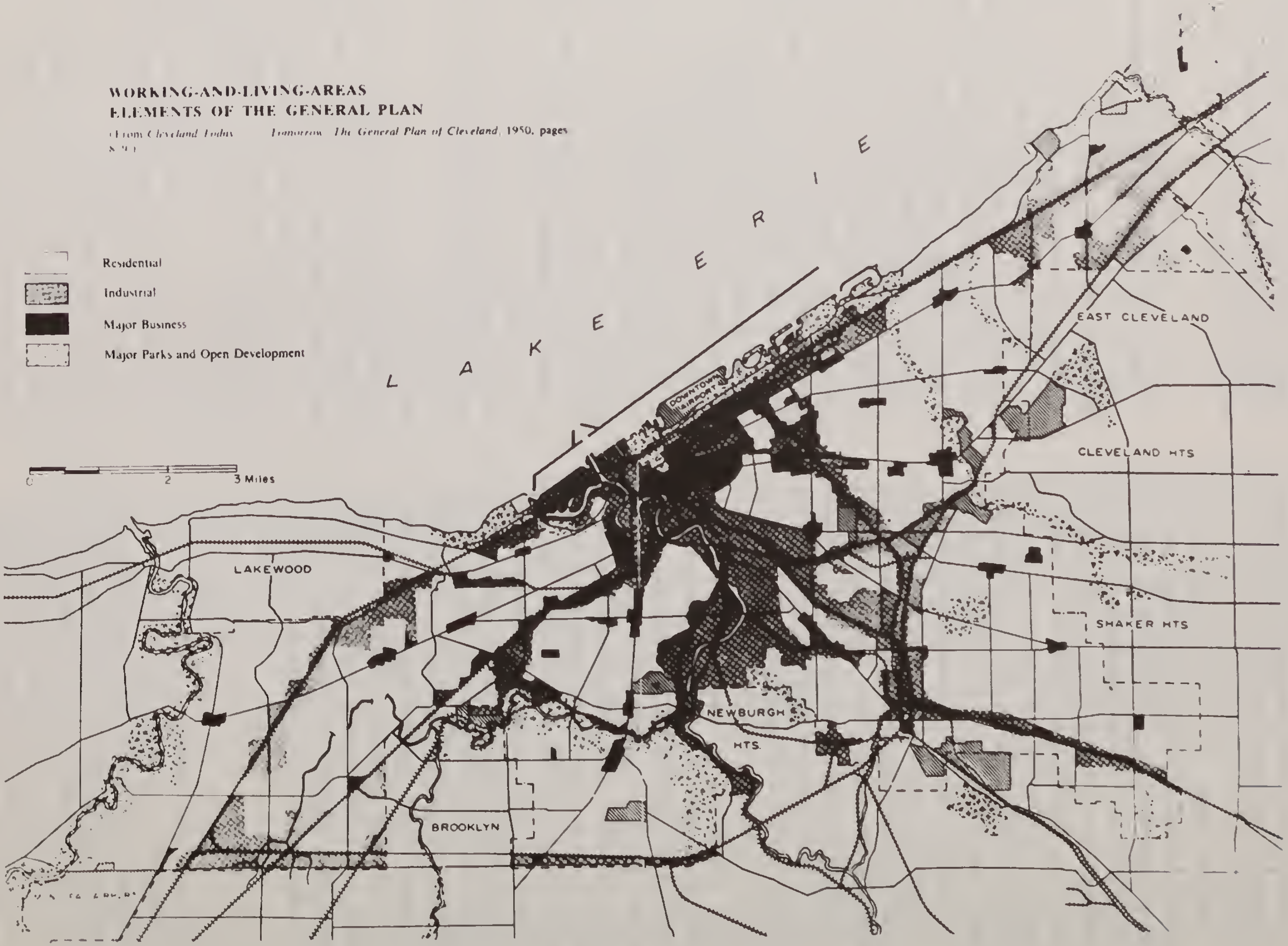


FIGURE 13–3. *Generalized land use map, Cleveland, Ohio*

carry around and use. Some provision for entering amendments should be made in the document. One solution is to use a loose-leaf binder, so that new pages can be inserted. Another is to provide a pocket where amendments may be kept.

The plan document should be self-contained, so that it will stand alone. It should not be necessary to consult other publications in order to grasp the essential ideas of the plan. Of course, some people may want greater detail, and it is appropriate to include references and a bibliography, but it should not be necessary for the average reader to undertake such research.

A final question is whether the document should be prepared as a slick or plain publication. Should the design talents of the planning staff be used to produce an eye-catcher? Often this has been done, and some very striking plan documents have resulted. However, there is an argument for conveying the image that the plan is a straightforward working document. While the legislators may be impressed with a flashy publication, they are not so likely to accept it as theirs.

Contents and Organization

The contents of the plan document may be divided into several parts, which are discussed

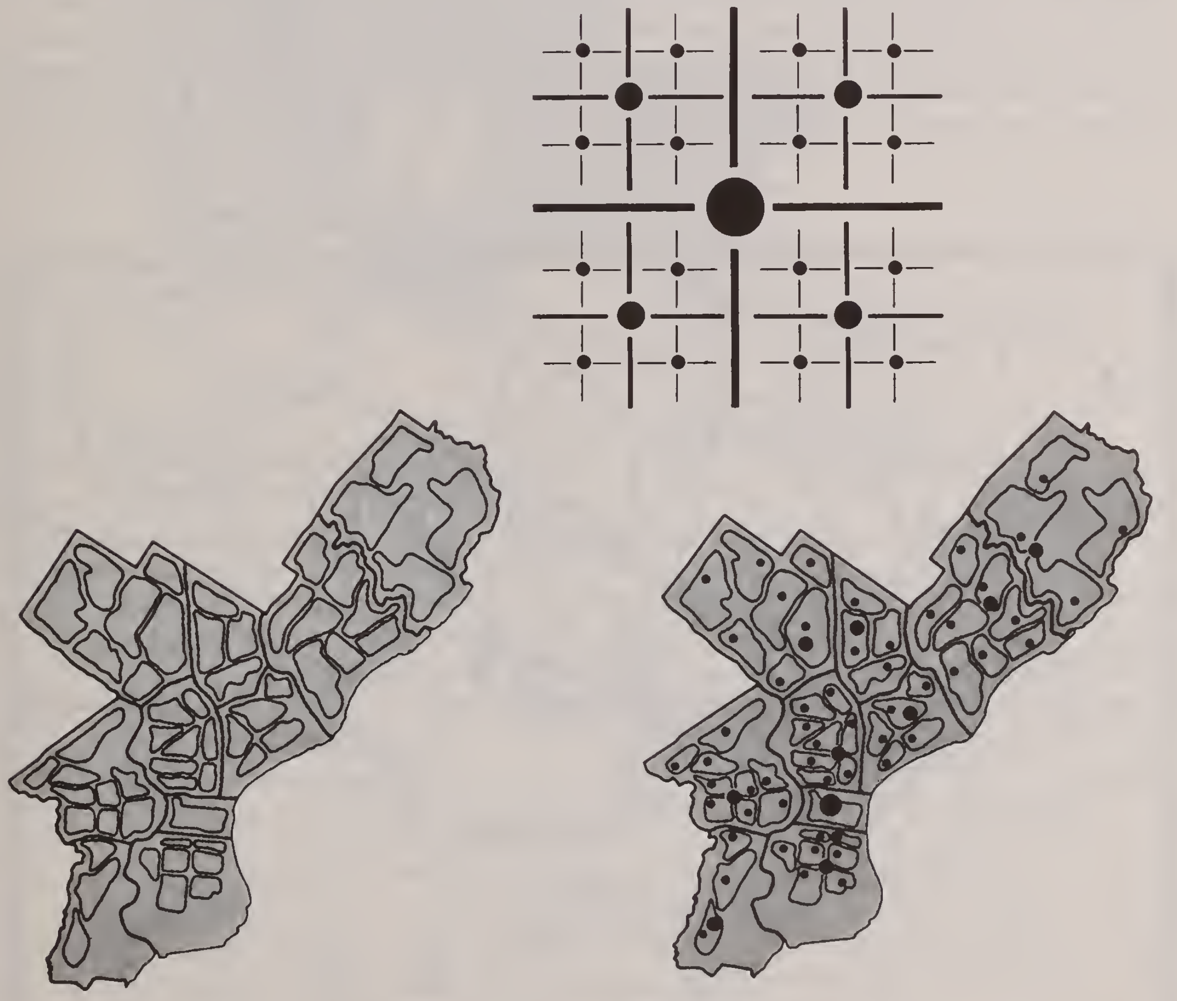


Figure 13–4. *Proposed service areas and neighborhood centers, comprehensive plan of Philadelphia (Above, a schematic concept for schools, hospitals, and other community facilities; bottom left, service areas for each set of facilities; bottom right, neighborhood centers for each service area.)*

in the sequence in which they would probably appear in the publication.

Introductory Material. The plan will serve as an introduction to city planning for many of its readers. Therefore, the document should open with certain material of essentially an educational character. This material should explain, in simple terms, what the comprehensive plan is, why the community needs it, and how it is to be used and implemented. It should also make clear that the legislative body bears the responsibility for the plan, and that the policies of the legislature are presented in the plan.

Such material can take a variety of forms. Often there is a letter of transmittal from the planning commission to the legislative body, or a letter to the citizens from the mayor or leader of the legislature. Another possibility is an explanatory foreword. The best technique is to reproduce the resolution of adoption, which should explain the rationale for the plan.

There should also be a table of contents. This obvious step, often overlooked, will make the organization of the document clearer.

Background Information. Usually a sizable portion of the document is devoted to a discussion of the historical growth of the community, an assessment of current conditions, and predictions of future trends. This material helps the reader to understand the reasons for the policies and proposals presented later. This section should be not merely descriptive, but also interpretive and evaluative. The community's strong and weak points should be identified, and the emerging problems, needs, and opportunities of the future should be anticipated.

Among the topics which might be touched upon are the general history of the community, its geography, population, economy, land use pattern, and regional context. The assump-

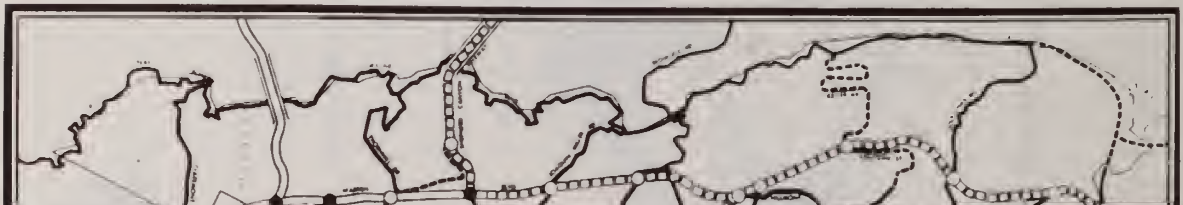
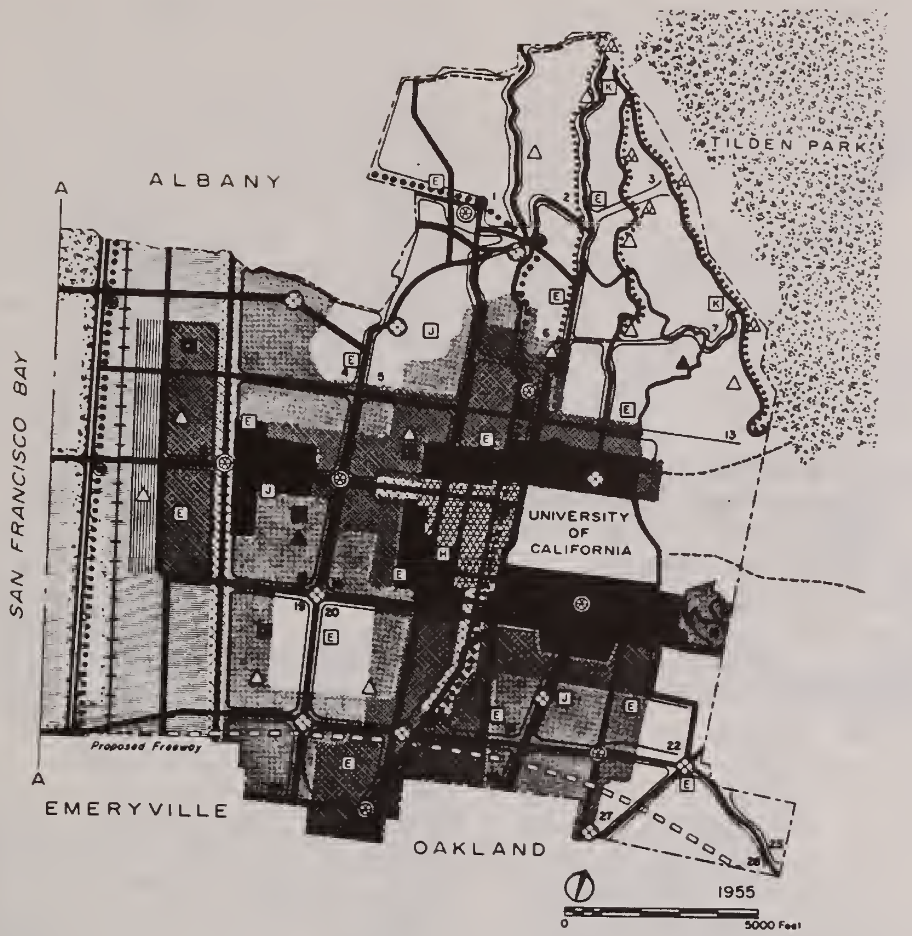


FIGURE 13–5. *Circulation pattern, Oakland, California*



1955

THE MASTER PLAN CONSISTS OF THIS MAP AND THE ACCOMPANYING TEXT

BERKELEY PLANNING COMMISSION

BERKELEY MASTER PLAN

(Note: That portion of the plan drawing showing schematic proposals for the development of the tidelands west of line A-A has been deleted.)

RESIDENTIAL AREAS

NET RESIDENTIAL DENSITY

- ☐ 0-30 Persons Per Acre
- ░ 30-50 Persons Per Acre
- ▒ 50-80 Persons Per Acre
- ■ 80-150 Persons Per Acre
- 6 Neighborhood Boundary and Number

COMMERCIAL AND INDUSTRIAL AREAS

- ▦ Central District
- ▩ Commercial Service District
- ⊛ Community Shopping Center
- ⊗ Neighborhood Shopping Center
- ▥ Special Industrial District
- ▤ Industrial District

PUBLIC SCHOOLS

- ☐ Existing
- ■ Proposed
- K Kindergarten-Primary
- E Elementary
- J Junior High
- H Senior High

RECREATION AREAS

- △ Existing
- ▲ Proposed
- ⚠ Viewpoint
- ○○○○○ Scenic Drive
- ––– Trail

CIRCULATION SYSTEM

- ═ Freeway
- ▬ Major Thoroughfare
- ━ Secondary Thoroughfare
- — Feeder Street
- ●●●● Rapid Transit Route
- ◉ Rapid Transit Station

FIGURE 13–6. *Generalized land use, master plan, Berkeley, California*

tions on which the plan is based should be noted. Last but not least, there should be an explicit statement of community objectives. While the planning staff is responsible for most of the background material, the legislators should be involved in formulating the objectives.

Summaries. To identify the most important ideas of the plan, it is recommended that two types of summaries be included, one written and one graphic. The written summary should be a concise list of the ten to fifteen major policies underlying the entire plan. The graphic summary should be a simple schematic diagram showing the relationships between major parts of the community and major functional elements of physical development. This should not be a precise map, but perhaps just an abstract pattern. It should be much simpler than the large general physical design drawing which also appears in the document. To date there has been little experience with such graphic summaries, although they have appeared in a few recent plans.

Instead of placing the summaries at the beginning or end, as is customary, it seems better to put them in the middle of the document, following the background material and preceding the presentation of more detailed proposals. Located here, they will make it easier to understand the proposals and view them in perspective. The location of the summaries might be indicated by printing them on a different color of paper or by a tab.

Physical Development Proposals. This is the major portion of the document; here the policies and proposals for future physical development are fully described. There may also be certain standards to guide the detailed design of specific facilities (such as the cross-section for a certain type of street) and certain principles to be followed in carrying out the broad proposals (such as elimination of industrial uses from residential areas). Reference to the unified physical design drawing should be made throughout this section, and there are usually supplementary drawings.

This section can be divided into five technical elements, the first three of which appear in virtually every plan, and the last two of which would be desirable additions. These are: (1) a plan for the use of privately-owned land, (2) community facilities, (3) circulation, (4) civic design, and (5) utilities. Usually there is a separate chapter for each of these elements.

The first element is sometimes called a "land use plan," Kent's "working and living areas." Included are the residential, commercial, industrial, institutional, and other basic uses of land. Sometimes each of these categories is given a separate chapter. Often there is a separate drawing showing the pattern proposed for each category of uses. The residential proposals imply a plan for the distribution of the population. The commercial section usually gives special attention to the central business district.

The community facilities element concerns those structures and areas—whether public or private—which provide supporting services for the population and the basic non-residential activities. Included are schools, hospitals, libraries, police and fire stations, civic centers, parks and playgrounds, churches, cemeteries, and cultural facilities. The comprehensive plan does not identify specific sites for these facilities, but only indicates the approximate areas in which they will be needed.

The circulation element consists mostly of proposals for highway facilities and mass transit improvements (whether rail or bus). There may also be proposals for off-street parking, railroad and bus stations, airports, the port, the special needs of trucking, and pedestrian circulation.

The civic design element is intended to bring aesthetic considerations to bear on the development proposals. There should be a three-dimensional synthesis of the major proposals, and perhaps discussion of some visually important details, such as street furniture and the preservation of architecturally significant structures. Many past comprehensive plans have not included any explicit consideration of three-dimensional design.

The utilities element covers those community services which are regularly distributed to properties throughout the locality, often through pipes or wires. Among these are water, storm and sanitary sewers, gas, electricity, tele-

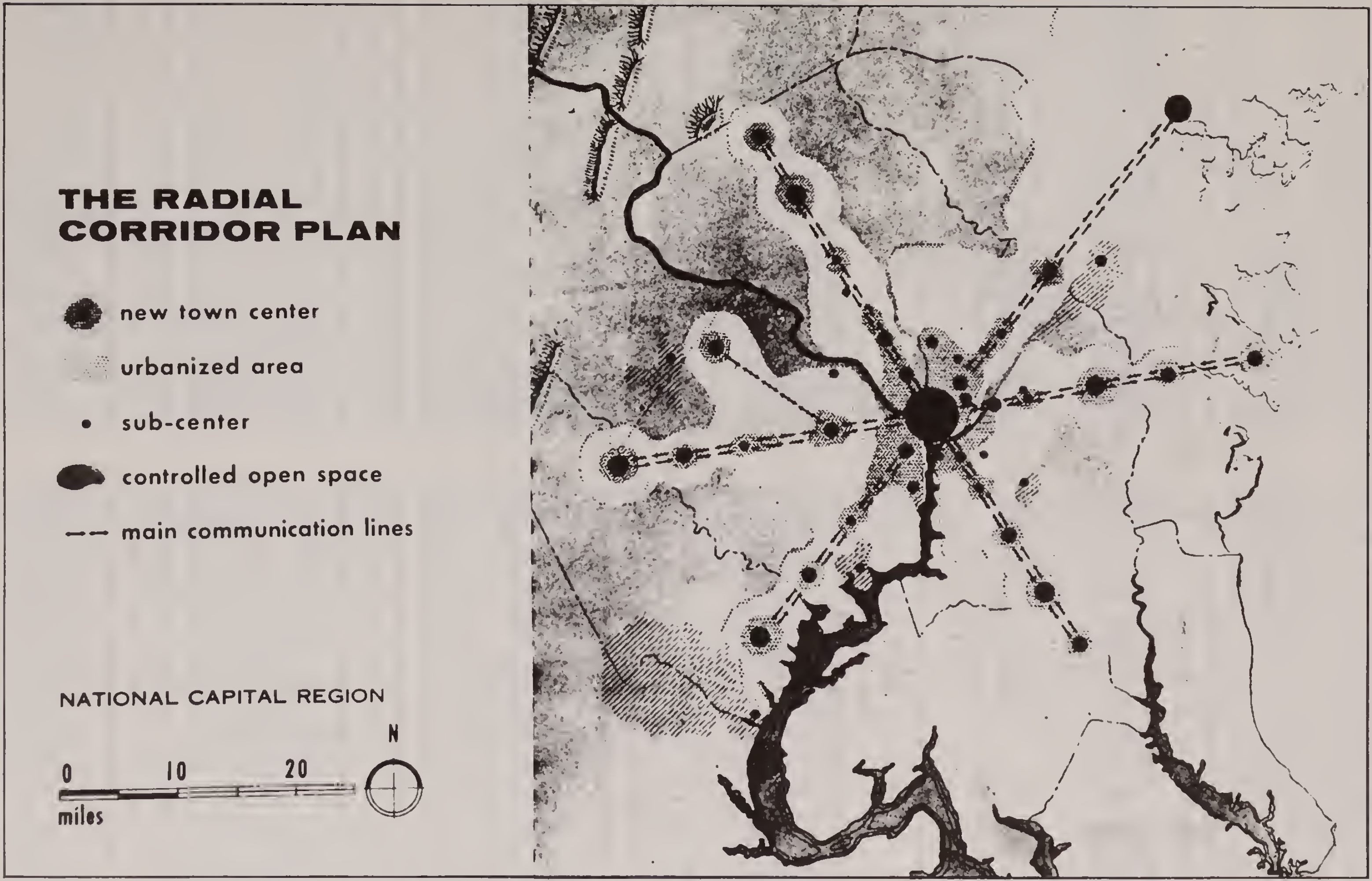


Figure 13-7. *The Washington Radial Corridor Plan*

phone, and refuse collection and disposal. In some cases these services require large sites (as for sewage treatment plants or dumps) which might also be covered in the community facilities element. If air and water pollution are serious problems, they might be discussed here.

Besides the five standard elements, each community may have some special feature or problem which calls for a section of its own in the plan document. This might be a major institution (a university, medical center, or state capital) or a major physical feature (tidelands, a river, or lake) which is important in the physical development of the community.

Concluding Material. There is usually a final section discussing implementation of the plan. This can be helpful to the reader who is not familiar with city planning and does not understand the relationships between the comprehensive plan, zoning ordinance, and urban renewal. There might be a restatement of the information given in the introduction on how the plan is to be used by the legislative body and citizens to guide the development of the community. This section should be purely explanatory; it should not include any detailed programs which would alter the plan's essential character of generality. Above all, the plan document should not include such implementary instruments as the zoning ordinance and capital improvements program.

To make the main text more concise and readable, it is customary to place some of the supporting data and technical analyses in appendices. Appendices might also include a bibliography, a glossary, the state's planning enabling act, and a discussion of the methods and techniques used in preparing the plan.

Large Drawing of the General Design for the Community. This is usually placed at the end of the document, although it could go elsewhere. Here all the separate proposals discussed in the various chapters are brought together in one drawing of the entire community so that their spatial relationships can be seen. While this has the appearance of a map, it is better to think of it as a diagram, since it is not intended to show precise boundaries or sites. It is important that this drawing be distinguished from the zoning map.

Problematical Materials. There is certain other material which occasionally appears in plan documents, or has been suggested as appropriate for inclusion in them.

Kent has recommended that a section be devoted to the relationship of the physical design proposals to the community's social and economic objectives. Such a section did appear in the Philadelphia plan, but it was quite theoretical and was aimed at professional colleagues rather than citizens. As yet, these relationships are poorly understood, and it is questionable whether a lucid and meaningful statement on this subject can be composed by the typical planning staff.

Some planners have suggested that cost estimates for carrying out the plan should be included in the plan document. Again, this was done in Philadelphia. It is difficult to say what is best. The comprehensive plan is meant to consist primarily of objectives and general policies; it is not a program of specific improvements. It seems wiser for cost estimates to be included in implementary documents, such as the capital improvements budget. However, it is true that decisions on general policies depend upon costs, and planners are becoming more able than heretofore to assess the cost implications of policies.

It has been argued that urban renewal should be given a special section in the plan document. The relationships between urban renewal and the comprehensive plan are still rather tenuous, since urban renewal started as a distinct program, usually outside of the planning agency. Urban renewal is a means of implementing the comprehensive plan, but in practice urban renewal agencies have had little to do with preparation of comprehensive plans. In the present situation, it does not seem necessary to devote a separate section to urban renewal. In any older city, many of the proposals for physical development will naturally be proposals for urban renewal.

Continuous City Planning

By Melville C. Branch

Part I. End-State Master City Plans

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Background

For the past 50 years or so, city planning in the United States has been characterized by both conceptual and operational inadequacies which have greatly limited its effectiveness:

1. It has long been assumed that a master plan should be drawn for a city 20 or more years in the future, adopted by the local legislature, and implemented by enactment of whatever laws, regulations, and monies are needed for its fulfillment;
2. The master plan is conceived as a printed publication, subject to occasional modification or complete reformulation at long intervals;
3. Very few planning departments have therefore chosen or been able to maintain anywhere near up to date either their basic information or their plans;
4. At least until now, city planning in the modern era has tended to function independently and separately from the political and municipal administrative process;
5. City planning has been viewed as exclusively long-range, general, and all-encompassing, and therefore distinct from and not critically related to shorter-range operations and events;
6. Because city planning has concerned itself with a future so distant and suppositional that present problems can be disregarded or projected into relative insignificance, city planners have been able to avoid the really difficult key problems and turn to those of lesser importance, those they might mitigate before they become critical, or those which will arise after the long-range plan has been published without their anticipation and discussion;
7. As a consequence of these facts—or contributing to them—professional city planners have tended to be idealistic rather than realistic, passive rather than constructively active and persistent;
8. Until recent years, there was greater concern with design and physical-spatial factors than with quantification, management, behavioral sciences, and scientific method.

Certainly, there have been exceptions to these generalizations so succinctly stated, but they are generally descriptive of the current state of city planning. While they do not apply to new towns during their construction under private ownership, they become relevant when the new town becomes a self-governing municipality.

Few master city plans in the United States have significantly shaped the development of cities. For example, one staff estimates that their large city planning department is responsible for less than ten per cent of either the fact or form of municipal growth and development. A year after master plan publications are printed, they are usually outmoded in important respects and significantly less relevant. Several years later, they are largely forgotten because a new or revised version of master city plans as they have been so grandly conceived in the past usually takes about ten years to prepare. Also, few communities can afford their high cost more often than once every decade, all the more because it has been a wishful rather than productive enterprise.

Despite this history, the delusion persists among many practicing city planners that the concept of the master city plan has been right and the record wrong. To make matters worse, past master plans defining a city as it should be two or three decades in the future incorporated only a limited number of physical-spatial elements, projected separately. Now with the emphasis on comprehensive and systems planning, it is presumed that what could not be done in the past for a few elements can now be done for all economic, social, political, and physical features and aspects of the city combined. The idea or intention is that the master city plan is presented and discussed, adopted in some legislative form, and effectuated over the time period of its projection by the necessary implementing laws and allocation of monies. Presumably, a new master city plan will be ready when the old one is realized at its completion date.[1]

Implicit in the traditional concept of the master city plan are a number of questionable conclusions. First and foremost, it presumes that the purposes, needs, and situation of an organism as complicated as a sizable city can be conceived, projected, foreseen, and predetermined 20 or more years in the future. The projective time span of some city plans is no less than 50 years. This end-state concept assumes that people's desires, objectives, and priorities are sufficiently known and fixed to permit drawing conclusions today with certainty concerning what they will want a half century hence—or that city planners are wise enough and will be allowed to do this for people.

Furthermore, the concept implies that people want to or will commit themselves a quarter- to a half-century in advance. It presupposes that no unexpected events or developments will occur which make it imperative or desirable to alter the plan repeatedly. It assumes that the municipality is sufficiently independent to project and act with finality on its own long-range future, either apart from regional, state, federal, or international influences and events, or according to reliable forecasts of the future behavior of these entities. Finally, it presumes that someone, the city planner or a group, has the knowledge and technical capability to analyze all important elements and aspects of a city, project them in concert, identify and quantify their numerous interactions, and explain the results and significant alternatives to the body politic and legislature clearly enough for intelligent reaction and collective decision. This complete analysis will be accomplished promptly so that the data underlying the master city plan are still valid at the time of decision.

The concept comprising these assumptions reflects the historical thread of utopian thinking in city planning and unrealistic optimism or missionary zeal with respect to feasible attainments. In fact, it is a concept which has brought more satisfaction and job security to the city planners who formulate master plans than results for the urban inhabitants who are the intended beneficiaries of this effort and expenditure. With some exaggeration, it could be said that city planning practitioners have been performing their own regenerative ritual, producing plans which sustain their professional employment, give them a sense of accomplishment, and justify educational programs to train their successors. Fortunately for city planners, the development of the planning process has overshadowed continued use of an unproductive concept of master city plans.[2]

Very few democratic societies will commit themselves to a completely planned end-state to be attained 20 or more years hence. This would require resolving now many basic issues and questions which are nowhere near settled, for example:

The form of the city: compact and dense, or dispersed and low-density?

Shall growth or size be limited? If so, how?

What is to be the relative expenditure of money between limited-access highways and mass rail transit during the 20-year plan period—to achieve what combination of the two in the end-state condition?

Since there is never enough money to meet all needs and desires, what are the cumulative expenditures and division of ultimate facilities to be between, for example, correctional and preventive law-enforcement and fire-protection facilities; hospitals and health maintenance clinics; private and commercial flying within the urban area; or parks, playgrounds, and open space and taxable income-producing use of the land?

What changes, if any, are to be provided for or encouraged in the level and methods of education?

Are the steadily increasing per capita demands for water, electric and gas energy, solid waste disposal, and teleintercommunication to be extrapolated and met?

What standards are to be attained by the end of the 20-year period with respect to environmental pollution of the air, waters, and ground by chemicals, biologicals, radiation, noise, and too many people?

How many dwelling units are to be provided in high-rise apartment structures, row and cluster housing, and detached single-family homes?

What changes, if any, are to be assumed in present land-use controls? Will land ownership and development opportunities remain essentially the same as today?

Should today's taxes, their type and percentage of family income, be projected to determine future municipal revenues?

Will there be changes in the type and extent of governmental subsidies or incentives?

Is the spatial dispersal of minority groups and low-income housing to be effected?

Are any provisions for nuclear defense to be incorporated in cities?

Such questions are not just of speculative or theoretical interest; answers are required before the end-state of a city can be conceived 20 or more years in the future. For each one of them, either assumptions must be made or the body politic or its legislators must decide and define now—with sufficient clarity to permit a program of progressive attainment—the characteristics and features of the city wanted at the end of the planning period and the means and methods of achieving them. To be sure, every single question and relevant detail need not be decided today. But logically as well as empirically, a future end-state for a city or any other organism cannot be formulated without assumptions or conclusions concerning the characteristics of the primary elements of which it is composed, their interrelationships, underlying forces and attitudes which determine what is likely to occur and what can and will be done, and specific mechanisms of realization. Without this prior determination, the end-state concept of a master city plan is a fantasy.

Of course, utopian thinking is not to be shunned. Ideal conceptions contribute to human thought and help resolve philosophical and social goals and choices. They encourage imaginative thinking and stimulate us to invent and aspire beyond the obvious and mundane.[3] But, by definition, utopias and planning objectives are different. The first involves a degree of idealism, an imaginative freedom of thinking beyond the constraints of practicality or likelihood of attainment, even ideas rejected or disliked by most people today.

By contrast, planning objectives are developed by projecting from the present into the future. Their achievement must be possible. Realism rather than idealism is the fundamental motivation, although imagination is definitely part of background thinking. It is this requirement of realism which multiplies both the intellectual and practical tasks of city planning. Fashioning an imaginary future is not difficult. It can be highly subjective and individualistic. But to determine planning objectives which are demonstrably desirable in the public or majority interest, which represent the maximum attainment the organism involved can realistically consider, and for which a program of effectuation can be formulated—this is probably society's most formidable task.

Underlying Difficulties

If these conclusions about master city plans and the planning process are generally true, why have city planners deluded themselves and their municipal clients for so long? There are several possible explanations reflecting how slowly human attitudes, awareness, and knowledge change. Throughout the five thousand years of city planning history, most community plans have been drawn for monarchial clients who could proceed to effect their urban desires, whether or not these were also goals of the people, or despite their objection. There may still be a residue of this approach when city planners presume that democratic societies should somehow be able to act with royallike centralism and fiat.

Also involved is the difficulty of gauging public opinion, detecting evolving attitudes, identifying consensus, projecting changes of value and objective, or determining the sources and balance of directive power. The difficulties of analyzing an organism as complex as a city are compounded in democratic societies where it is the product of so many individual and organizational situations, desires, endeavors, competences, and markets. Because of such difficulties, it is understandable that some city planners are attracted, knowingly or unknowingly, toward end-state master plans incorporating many assumptions by professional staff as to the outcome of trends which are actually still frustratingly unclear and with root questions still unresolved.

Contributing to the professional preference for the fixed plan, even at the risk of impaired reality and unlikely acceptance, has been the unwillingness or inability of traditional city planning to consider probabilities except in the crudest or most subjective way. This has been because it was much easier not to, or because many city planners prefer absolutes to uncertainties and conditionalities. Also, in many cases, reliable statistical data, methods of analysis, or necessary mathematical formulations were not available.

City planners share the general human tendency to forget or transcend reality. To wish urgently, to hope excessively, to imagine, to dream and daydream, to fantasy—these are necessary for man to cope with his unique awareness among animals of the inevitabilities and rigors of real existence. Wishful imagination is, of course, an important ingredient of literature, art, music, and most fields of human knowledge and endeavor. But the city planner is obligated, by the definition of his field and its basic purpose, to minimize unrealistic wishful thinking to the extent possible in his staff role, and to make his analyses and recommendations in terms of optimum reality. Few people find this easy to do. Its attainment by the city planner requires a certain personality, coincident motivation, deliberate effort, and supportive education.

Another contributing reason for the prevalence of the end-state concept may be the follow-the-leader or bandwagon tendencies of institutions, including municipalities. It is much easier to copy than to devise or revise. Is it reasonable to question whether the master plan of a sister city is sound or subject to basic improvement? Does it really matter when master plans in the United States so often serve the superficial purpose of confirming concern for the future, rather than as a significant instrument of municipal management and city planning? It is surprising how often bureaucracies elect the path of least resistance and difficulty by simply adopting the conclusions and procedures of brother institutions—without critical review, mistakes and all.

City Planning After the Fact

End-state master city planning accounts at least in part for other inadequacies of the field in the past. The failure of city planning departments to keep their information and plans up to date is related to their preeminent concern with a long-range future conceptually independent of the present and near term. When plans are projected from the present and consider the realities of changing conditions and unanticipated events, they must be kept closely up to date. It would be impossible, as has occurred in New York City and Los Angeles, for the master plan of the one to be in preparation 31 years and the other over 10 years.[4]

During these times, thousands of decisions had to be made and actions taken. Neither an organized body of information and analysis nor a city plan was available as a reference in these protracted periods during which an end-state master plan was ostensibly being formulated. Therefore, interim decisions had to be based on whatever knowledge had accumulated in the minds of each decision maker: fragmented information, efforts at correlating different urban elements, and some form of conceptualization of the city as a whole. However, actions taken on the basis of these decisions and events occurring constantly in the city affected what could be considered in any city plan. Even an end-state master plan devised after the fact must reflect reality if it is to be more than a deliberate delusion or theoretical ideal. In this way, the illusion of a grand end-state master plan persisted, when in fact it was being continuously shaped by relatively unordered decisions and actions while waiting and waiting for the prescribed product.

Besides the questionable validity of the hundreds of master plan publications in the United States originally produced in this long drawn-out way, they are revised infrequently. Usually, they are shelved to be replaced years later by another version of the same. Therefore, whatever usefulness the initial plan possesses is rapidly lost as changing conditions and events reduce its relevance or seriously weaken supportive arguments because background data can be shown by opponents to be badly out of date. Electronic data processing and automatic graphic display systems are no guarantee in themselves that city planning is current. This depends far more on how the process of planning is conceived and how it operates; past city planning could have been closely up to date all along had this been desired.

Disassociation from Realities

The modern era of city planning in the United States was partly a response to gross municipal inefficiency and corruption in local government at the turn of the century. City planning commissions were established as recommending bodies to help bring honesty and more of the public interest to city hall.

Ever since, city planning has tended to divorce itself from politics and regular municipal administration, analytically as well as operationally. City planning makes its recommendations to the legislative body of the municipality with the realization that the legislature makes the final decision. City planning can leave most political and other socioeconomic realities and problems to the lawmakers. It can elect to produce a city plan which satisfies its own self-limited concept and responsibilities but does not meet the full range of reality which those who direct the future of the city must face and somehow resolve. Thus, many master plans describe what the staffs think the legislators and body politic should agree is desirable, rather than the best way of meeting the needs of the present and foreseeable future and at the same time shaping the overall form and functioning of the city toward a healthier, more enjoyable, and more productive environment.

Because city plans necessarily involve the type of basic questions and conflicts mentioned earlier in this discussion, they cannot be divorced from political, institutional, administrative, economic, financial, budgetary, social, legal, and many other considerations. Yet, with few exceptions, master city plans in the United States have avoided this realistic involvement, whether because of analytical difficulties, ignorance, illusions of nonpolitical purity and operational noninvolvement, or by defensively following precedent plans despite their limitations or invalidity. Certainly, it would be much more difficult and demanding to attempt to incorporate in the end-state type of plan the necessary assumptions and specific recommendations concerning numerous unresolved and controversial considerations which are nonetheless essential to its realization.

The Isolated Future

A natural corollary of the characteristics of traditional city planning as described above has been strong emphasis on the very general and the long-range future and minimization of the specific and immediate. It was presumed that after commitment to an end-state master plan, city planning or municipal operating departments could develop the strategies, tactics, mechanisms, programs, and schedules required for its attainment. This has not worked out because this follow-up or implementation, rather than being secondary, is the vital essence of real planning and the most difficult part of the process. To prepare plans without reference to reality or effectuation is relatively easy. Witness the end-state plans commonly produced in the United States which for years have presumed resources that are not available, assumed instruments or effectuation that will be a long time coming, or incorporated positive answers to socioeconomic, political, and procedural questions still strongly debated and far from consensus.

Furthermore, exclusive focus on the long-range future has discouraged city planning staffs from acquiring and maintaining the knowledge of ongoing operations, of real time and lead time, and of sequential attainment necessary to formulate a realizable master plan. The philosophies of end-state and progressive planning are different. As described later in the section on Continuous Master Planning, successful city planning requires coincident consideration of the general and the specific, strategy and tactics, long-range and short-range, operational and projectional, present as well as end-state.

"The science which is parent to much of modern technology is cybernetics, . . . the view that an organized, adaptive system is a goal-seeking ensemble which can sense its relation to its objective and modify its behavior in order to approach the objective more closely. . . . The cyberneticist, practicing his profession in the environs of city hall finds that city government can be viewed as a feedback control system. The basic elements of goal-setting, information feedback, actuation, and disturbances are present, although not in familiar form. An examination of those elements is useful for disclosing ways to improve government. . . ."[5]

City Planning Personnel

Architects, engineers, and landscape architects were the chief practitioners of city planning in the United States through the first half of this century. The first two of these professions were predominant in community planning from its earliest origins. Of course, architects and engineers are now outnumbered on city planning staffs by a combination of professions involved in city planning in approximately the following order: geography; economics; sociology; operations research; law; applied mathematics; environmental, health, political, computer, and management sciences. Most professions and fields of knowledge are now directly concerned with some phase of comprehensive city planning, municipal management, urban research, or urban studies as they are broadly defined today.

The historical dominance of architects and engineers in city planning for so long may have reinforced the tendency toward the end-state type of master plan. In their work, both of these professions draw complete plans for what they are designing, in sufficient detail not only for the client to see what he is considering, but for precise specification, costing, and construction. Also, throughout most of history, their clients have been rulers or powerful enough people to insure completion of the projects they proposed. Only one or very few persons had to be satisfied for these projects to proceed. And since they were physical installations which did not involve socioeconomic and political considerations beyond the project site, the scope of concern and the plans of architects and engineers were limited to the three-dimensional entity which was to be the final product. It was only natural, therefore, for them to approach plans for cities in the same way. Unfortunately, as cities became bigger and more complex and less subject to authoritarian decision, the end-state physical-spatial project plan was no longer valid when applied as a grand scheme conceived for an entire community. Being more practical and usually working on utilitarian projects, the engineer abandoned inappropriate use of the end-state concept in city planning much sooner than the architect.[6]

Part II. Continuous City Planning

Basic Concept

What must gradually replace the grand master plan delusion and the after-the-fact type of city plan is continuous master planning, in which certain elements of the city are projected far into the future, others for the middle-range, some short-range, and a few not at all. The master or general city plan is not a document which emerges from some costly program of mammoth effort, revelation, and resolution, sporadically altered until another productive spasm can be afforded years later. It is always as up to date as necessary. No pretense is made that is an intellectually or analytically complete statement at any given moment. Rather, it is the continuously changing representation of what the municipality can and intends to carry out with respect to its future.

Specific plans and programs are formulated for those functions, elements, or projects which are of such nature or are sufficiently circumscribed that they can be analyzed with the necessary precision and reliability. Different municipal utilities illustrate functional systems which can be planned separately with precision, but less exactly as they are combined into larger subsystems of the total system constituting the city as a whole. Distribution systems for electricity, gas, and oil are easier to plan separately than together as a coordinated subsystem supplying energy. Similarly, integrating sewage, household trash, construction debris, junked automobiles, and infectious hospital waste into one subsystem of waste disposal is much more difficult than dealing with each system separately. Nonetheless, the more systems which can be planned together as larger municipal subsystems, the sounder the planner for the organism as a whole.[7]

There is a wide variation in how much is known about different systems comprising a city, the extent to which they can be quantified, and their likely development. For example, new technologies cannot be forecast and planned as reliably as the physical systems or facilities they may vitally affect. Thus, a municipal water system may require revision or replacement as the recycling of waste water is made technologically feasible and psychologically acceptable, or an urban mass transit system may be changed as new types of vehicles become practical.[8]

Some systems are particularly difficult to correlate because normally they are associated with, belong to, or are institutionalized within different urban subsystems. Tax policies, for example, belong normally to an economic-financial subsystem of the city, but through the local property tax they vitally affect public education, the amount of open space, and the percentage of single and multiple dwelling units (and thereby urban density). It is clear that many different municipal systems cannot be treated as uniformly as required for an end-state plan.

City planning must incorporate analytically current information, conditions, and decisions to a much greater extent than is now the case. Longer-range plans must represent the outcome of a succession of actions and anticipations rooted in the past but beginning or continuing in the present. To formulate longer-range plans without working out their derivation from the present through the intermediate future is analytically invalid as well as indefensible in practice. On the other hand, city planning certainly cannot assume the operating functions of municipal departments such as finance, building regulation, traffic, public works, or social welfare. Day-to-day management and long-range planning for each such function constitute a full-time task. However, city planning is the central mechanism for synthesizing the operations, budgets, and plans of separate municipal departments with relation to the total city system and its projected future. In this particular respect, the master city plan and the corporate business plan serve the same purpose of coordinating the plans of different groups, divisions, or departments in the organization.[9]

Continuous master planning must encompass the spectrum from the past, to the present, toward the distant future: obligations and commitments from the past, immediate needs and long-range objectives, tactics and strategy, certainties and uncertainties. Some elements, such as freeway and primary water-supply lines, are projected 50 or more years into the future. Some, such as land use in certain areas, may not be planned more than a few years ahead. Others, such as changes in restrictions on outdoor advertising, in the policies of private lending institutions investing in urban land and real property, or the forms of government subsidy and incentive, may at times be difficult or impossible to forecast.

The city plan must incorporate information and projections for each principal urban element separately and portray their synthesis into a combined pattern of actions and objectives over time for the best benefit of the city as a whole. It must be maintained and displayed in such form that it can be revised regularly and completely and quickly changed when need be. Above all, it must always be sufficiently up to date to serve as the basic analytical simulation of the municipality and the official reference for discussing and deciding many different matters. It is ahead of the game rather than running to catch up. To function in these ways, the master city plan cannot be so restricted by legislation requiring bureaucratic formalities that the necessary combination of fixed objectives and flexibility is impossible. It will probably include budgets for one or two years, operating plans for two to three years, and longer-range projections, policies, and plans for various periods in the future.

Master plans must be formulated in a far more flexible and dynamic way than the booklet or brochure which has been the accepted statement for master plans in the past. The first step in this process requires a mechanism of analysis and exposition in a place similar to the planning rooms of many large corporations and to the NASA spaceflight center familiar to millions of television viewers (on a larger scale and more as an operational than advance planning mechanism). Eventually, simulation for city planning purposes may be handled entirely on output-display devices connected with electronic computers and videotape storage, but this will be some time coming.

Analysis

Primary Elements

The analytical approach of continuous city planning is opposite to that for end-state plans. Rather than attempting or pretending to cover everything and project it accurately into the distant future, continuous analysis begins with deliberate modesty. First, the most important elements for the functioning, form, and future of the municipality are identified. Surprisingly, the voluminous literature of city planning contains no conclusions or consensus concerning which elements are most necessary for comprehensive planning. Multitudinous studies are made, requiring all together a vast quantity of data; but no priorities can be deduced concerning what should be analyzed first. Although every element of information for city planning is interrelated with every other, analysis of every interaction is neither feasible nor necessary. Figure 1 illustrates one set of primary elements which most people will agree are basic to any realistic and meaningful planning of cities.

Surely, the population of the community and its housing are paramount elements. To exist and function, people must use the land and transport themselves and materials in and about the city. Not only is employment an indication of the economic base, it is also an element which must be maintained at a certain level if the municipality is to remain economically healthy and ultimately to survive. Economic-financial factors have been largely ignored by city planning in the United States, except occasionally to make recommendations concerning the capital improvement program. Rather than planning in terms of available funds and their probable or desirable allocation, planners have either ignored this constraint or presumed that someone would somehow procure the funds the planners said were needed.

Of course, the city cannot exist without the potable water, energy, drainage, and waste disposal provided by municipal utilities, or in some more primitive way. While not mandatory, and varying widely between cities, facilities and services for education, health, municipal administration, and other governmental activities are accepted measures of community attainment in modern industrial societies. Besides the physical and socioeconomic deterioration of urban areas long recognized by city planning, environmental pollution is now recognized as important to many communities for a long time to come. For too many years, city plans have ignored means of effectuation or presumed they would be enacted forthwith. Planning, of course, is realizable only to the extent society supplies the means of putting it into effect. This is seen clearly in the potentialities of zoning to limit density, restrict growth, curb excess outdoor advertising, or clarify local airspace jurisdiction.[10]

While various persons might select different primary elements to be employed for continuous city planning, and the most important elements vary from community to community, a priority must be established. Clearly, everything cannot be handled at once, nor can all information be collected, much less analyzed successfully, In every form of planning, primary elements must be selected, although they may shift with time, events, different values, changes of objective, or other developments.

Information

There must be information available with which to evaluate and study these elements, from local, state, or federal governments, from private enterprise, or gathered by the planning agency itself. It must be available at a cost which is feasible and worthwhile, sufficiently reliable, and available soon enough for the intended purposes. Continued availability should be reasonably certain, and data should be sufficiently comparable over time to reveal trends. To the extent possible, the quantification of information should facilitate comparison, correlation, and projection of components.

Unless the data for a particular element meet most of these requirements, inclusion of the element in planning analysis must be postponed. Careful and controlled use of data for basic analysis is particularly important for city planning, which has been ineffective and wasteful with data, often collecting masses of information indiscriminately with little regard for its relative importance and correlation with other data. In fact, frequently, city planning staffs ask for more and more information, not because it is specifically needed, but in order to prolong the process, avoid tackling critical but difficult problems, or in a vain attempt to collect the enormous amount of information which would be needed theoretically for the end-state type of plan described earlier.

As shown in Figure 1 in the supplementary notes and righthand columns, the data will differ in how timely they

FIGURE 1. ILLUSTRATIVE CORE INFORMATION AND ANALYSIS

Supplementary Notes:

① Size of all panels = 36" x 52" (3' x 4'4")
② Scale: 1" = 4800' (.909 mile); single panel includes city
③ Scale: 1" = 1600' (.303 mile); 7 panels cover city
④ Scale: 1" = 400' (.076 mile); 79 panels cover city
⑤ Interval when information is revised or renewed
⑥ Overlay at same scale as: C (Citywide), S (Section), or A (Area) panels
⑦ Information is maintained for: C (Citywide), S (Section), and/or A (Area) level(s)
⑧ ● = Transparent Panel superposed on Base Panel; ◆ = different information of one category on 1 Transparent Panel (shown on same horizontal line); ⧫ = different information in different categories on 1 Transparent Panel (shown in same vertical column); ↕ identifies the categories of information shown on this Transparent Overlay, which are not listed consecutively in the chart. Transparent Overlays are attached to Panels and stored in drawers
⑨ ◊ Identifies statistical-type display panels which are not transparent

Information Category No.	CATEGORIES OF INFORMATION		CONCEPTUALIZATION-DISPLAY-ANALYSIS															
			Opaque Base Panels ①⑧				Transparent Panels and Overlays ①⑧						Other Panels		Correlation			
			Map	Photo			Present		Projection			Past						
			Citywide ②	Section (Semi-Controlled Mosaic) ③	Area (Semi-Controlled Mosaic) ④	Recycle Time (Years, Months, Weeks) ⑤	Base Panel as Background ⑥	Spatial Unit for Information ⑦	Short Range (Year 1)	Medium Range (Year 5)	Long Range (Year 20)	Historical (Past Years as Shown)	Statistical Array ⑨	Trend Line, Bar Chart, Other ⑨	Correlations achieved by: 30—Superposition of Transparent Panels and/or Overlays at the same scale; 15—Comparing different Panels and/or Overlays of different scale side by side; 3—Observation of Statistical Arrays, Tables, Charts, etc. 3 or 4 Transparencies over a Base Panel are considered maximum without conceptual confusion.			
POPULATION, HOUSING																		
1	Population Distribution: –18, 18-60, 60+; Major Ethnic Groups	⑧	◆	●	☒	2	S	A	☒	◆	20	5	☒	☒	4/12	13/14	18/	
2	Population Distribution: Income		◆	☒	☒	2	C	C	☒	◆	20	5	☒	☒	4/			
3	Population: Growth, Decline		◆	☒	☒	2	A	A	☒	◆	20	5	◊	☒	4/20			
4	Residential Housing: Supply, Characteristics, Distribution		☒	◆	☒	6M	S	A	☒	◆	20	5	◊	◊	1/2	3/8	16/	
LAND USE, TRANSPORTATION																		
5	Land Use: Residences, Industry, Commerce, Institutions, Recreation, Transportation Routes		✦	☒	↕	W	C/A	C/A	☒	◆	20	5	◊	☒	6/7	15/16	18/21	22/
6	Ground Transportation: Freeways, Major and Secondary, Highways; Rail		✦	☒	↕	W	C/A	C/A	◆	◆	20	☒	☒	☒	5/7	18/		
7	Air Transportation: Airports, Helistops, Airways		✦	☒	↕	W	C/A	C/A	◆	◆	20	☒	☒	☒	5/6	18/		
UTILITIES																		
8	Water Supply: Main Lines, Secondary System, Reservoirs, Pumping Stations		✦	☒	☒	1	C	C	◆	◆	20	☒	☒	☒	4/			
9	Storm Drainage and Sewerage: Main Lines, Secondary System, Collectors, Plants		●	◆	☒	1	C/S	C/S	◆	◆	☒	☒	☒	☒	4/			
10	Solid Waste Disposal: Systems, Disposal Sites		◆	☒	☒	1	C	C	◆	◆	☒	☒	☒	☒				
11	Power-Electric, Gas, Other: Main and Secondary Lines, Plants, Stations		✦	☒	☒	1	C	C	◆	◆	☒	☒	☒	☒	18/			
FACILITIES, SERVICES																		
12	Education: Universities, Colleges, Schools		✦	☒	↕	1	C/A	C/A	☒	◆	☒	☒	◊	☒	1/			
13	Health: Hospitals, Clinics, Sanitariums, Other		✦	☒	↕	1	C/A	C/A	☒	◆	☒	☒	◊	☒	1/			
14	Governmental: Police, Fire, Parks and Playgrounds, Other; Administrative Centers		✦	☒	↕	1	C/A	C/A	☒	◆	☒	☒	◊	☒	1/			
ENVIRONMENTAL: POLLUTION, DETERIORATION																		
15	Physically Blighted Areas: Smog, Noise, Neighborhood Deterioration, Other		☒	◆	☒	M	S	A	☒	◆	☒	5	☒	☒	5/			
16	Socially Blighted Areas: Crime, Delinquency, Drug Addiction		☒	◆	☒	M	S	A	☒	◆	☒	5	◊	☒	4/5			
EMPLOYMENT																		
17	Distribution: Unemployment, Welfare by Age and Ethnic Groups		☒	◆	☒	M	S	A	◆	◆	☒	5	◊	☒	2/4	6/15	16/18	
18	Major Employment Centers and Sites: Areas, Plants, Places		●	◆	☒	M	S	A	☒	◆	☒	5	◊	☒	5/6	7/11		
ECONOMIC, FINANCIAL																		
19	Source and Application of Funds: Municipal, County, State, Federal		☒	☒	☒	Y	☒	☒	☒	☒	☒	☒	◊	☒				
20	Economic Condition: Employment; $ Volume: Manufacture, Retail Sales, Construction, Other		☒	☒	☒	Y	☒	☒	☒	☒	☒	☒	◊	☒	3/4			
EFFECTUATION																		
21	Zoning: Residences (Multiple and Single Family), Industry, Commerce, Institutions, Recreation		☒	☒	◆	W	A	A	☒	◆	☒	5	◊	☒	5/			
22	Capital Works Programs: Municipal, County, State, Federal		☒	◆	☒	Y	S	A	◆	◆	☒	☒	◊	☒	5/			

Base Panels are kept up to date: Citywide map panels by cartographic revision, photomosaic Section and Area panels by new photography at least once a year. Further information is not applied to the surfaces of Base Panels, except temporarily to display a particular situation. Transparent Panels may have information applied directly to their surfaces. Transparent Overlays — displaying various information and storable in map drawers — may be attached to the Transparent Panels by corner pins. Other Panels are for statistical type information: plain surface with stick-on materials, menu-board, magnetic, etc.

TOTALS						
	14	8	7	Categories of Information	13	1
	☒	☒	158	Transparent Overlays	4	
	1	7	79	Opaque Base Panels	☒	☒
	8	56	5	Transparent Overlay Panels	☒	☒
	9	63	84	TOTAL NO. OF PANELS	4	

should be, how often they should be renewed, their percentage accuracy, whether they need to apply to the entire municipality or only part of it, and how far into the past they should extend to support conclusions concerning trends. Not all data will be numerical. For example, the attitude of Congress or a state legislature toward matters vitally affecting the city are probably better reported by an experienced and broadly informed observer than by informal straw polls which do not take into account differences of role and power among legislators. Such important intangibles as the political moods and attitudes of the local power structure are probably better read by following a prescribed scope and sequence of individual observations than by attempts at repeated self-conscious scientific sampling.[11]

Analytical Core

An analogy from corporate planning illustrates the kind of analytical core lacking in present-day city planning. For years, businesses have quantified their activities, based many of their decisions, and appraised their success on three analyses: operating statement, profit and loss statement, and balance sheet. Although it has long been known that these statements cover only the primary aspects of the business, they serve nonetheless to run businesses successfully. Additional information can be incorporated into this closely correlated core of information and analysis, or the factual and comparative accuracy of each element can be progressively improved. This, is now occurring at an increasing rate in corporate reporting and analysis as accounting deficiencies are identified, computers permit more complex and rapid calculation, and public interest is brought into better balance with private entrepreneurial desires. As corporations grow in size and diversity, the core of information and analysis which they maintain for operating and planning purposes becomes ever more crucial to successful management and decision making.[12]

While multinational corporations now employ as many as several hundred thousand people working in several dozen different enterprises, they are not as difficult to manage and plan as a city. Ownership and control are far more centralized and absolute; motivations and objectives are simpler; and factors to be considered are far fewer.[13] Nevertheless, the principle of a core of information and analysis applies equally to municipal management and city planning. Without it, public management is inefficient if not chaotic, and city planning is ineffective if not a delusion. Every planning activity needs such a core to provide the factual basis for rational conclusions, decisions, and planning ahead. It may be formally specified and regularly reported or exist only in the mind. The information and analysis can be neither complete nor certain because total knowledge is impossible, but it is no less necessary for sound planning.

Correlation

Because each element of a city is directly or indirectly interrelated, correlation is a fundamental part of planning and meaningful analysis. By adding another essential dimension of understanding, correlation makes it possible to determine how available resources are best allocated among the various components of a municipality to meet functional requirements for its continued operation and to achieve certain objectives through progressive change.[14] This allocation of resources is, of course, a primary purpose of planning; correlation is required for the underlying analysis of the organism necessary to make this allocation. Theoretically, there is almost an infinity of interrelationships among a relatively small number of elements. Those few which it is feasible to quantify and study regularly must be selected.

Such selections are illustrated in the righthand column of Figure 1 under the subhead "Correlation." For example, correlations are suggested between population distribution and: residential housing; education; health; government; and employment centers and sites. These correlations represent well-known relationships between various physical facilities and the areal distribution of the population they serve. Another example is the relationship indicated between water supply and the residential housing it serves. Only a few of the many possible correlations are illustrated in Figure 1.

These correlations are made in various ways: by individual judgmental comparison; by collective judgments obtained in an organized way; visual comparison of data side by side; by overlay of information; by ratios established for comparative purposes and to monitor change; by mathematical correlation with or without the aid of computers. As correlations are used and their validity tested by experience, they are retained, improved, or discarded in a constant process of development.[15]

Because in practice correlations are particularly difficult to formulate for comprehensive city planning, quantitatively meaningful interactions are formulated much less frequently than presumed or pretended. Most such correlations today are largely personal and judgmental. After one or several functions have been interrelated, further quantitative correlation is obscured or most often not attempted at all. Unfortunately, the impression is usually given that city planning presentations and recommendations are supported by reliable and conclusive correlations, when in fact they are not.

Projection

By definition, projections into the future are an inherent part of planning. Some are a matter of choice and therefore quite certain, such as a schedule of construction or program of accomplishment for the future involving no likely constraints. Some are the result of previous commitment: repayment of bonded debt or minimum levels of government service. Normally, these two can be reliably projected. Another category of elements is extrapolated from past trends, forecast from established correlations, or projected from an accumulation of knowledge concerning the community accurate enough for the purpose. This category is exemplified by population forecasts, average demand for water and energy, crime rates, or the location of private development. The reliability of these projections varies widely. They require a closer watch, more frequent review, and quick response if successive short-range changes indicate a trend.[16]

Each element in the core of analysis is projected separately into the future in one way or another, and to the extent possible all of them are projected together so that they maintain their proper interrelationships at each interval of future time. The latter is by far the most difficult task in planning, possible at present only in part and within an expected range of error. Thus, certain projections are expressed within upper and lower limits, rather than as a single quantity or trend line.

In continuous city planning, there is no mistaken attempt to formulate a complete end-state master plan by projecting all elements and significant aspects of the municipality in concert some 20-25 years into the future. Some elements of the city, such as its main highway or drainage systems, will remain essentially as they are now for 50-75 years. Others can be forecast reliably for 5-10 years. Some must be left open because situations or conditions make projection no better than guess. Therefore, continual information gathering, observation, and analysis are more important than attempts at positive long-range prediction.

Rather than focusing on the distant future and the end-state type of master plan, continuous city planning starts with today and works toward the future. Of immediate importance are the next several years. Not only is the next fiscal year specifically budgeted, but in addition tax rates and assessments, borrowing capacities, state and federal assistance, and other financial factors limit the funds available under any circumstances. What takes place in the next several years may have a profound effect on what is possible thereafter. It could further the achievement of city planning or postpone certain planning purposes, even make them impossible.

Therefore, continuous city planning first projects the next budget year in detail, the subsequent year in somewhat less detail and certainty, and the following five years as thoroughly as practicable. Every year, the seven-year span of projection is maintained by adding another year into the future. The first two years constitute an operating plan, combining the budgeted and immediately subsequent intentions of municipal departments with planning for the city as a whole, thereby insuring that longer-range plans relate to reality. The projections for the next five years cover the "middle-range bridge," the period next most predictable and critical for the future.[17] For it is during this time that progressive improvements and changes can be effected toward planning objectives. Some projections for this period are firm, others subject to continual scrutiny and frequent adjustment.

Projections and plans beyond the seven-year period of formal plans are made when they are reliable enough to justify the time and cost of the projective study they require and when the means for their realization can probably be attained. For example, municipal utility systems involve projections and plans which often must be started more than seven years before realization because of the long lead time required for system design, engineering, acquisition of land, funding, approvals, construction, and a test period of operation. The important requirement is that these longer-range plans represent firm intentions to produce and the availability or strong probability of funding and other requirements for effectuation.

Other projections are expressed as policies. Thus, continuous city planning might recommend formal adoption of a policy that more low-income housing be programmed if and when this is possible, because funds become available or community attitudes change, or for another reason. Or with reference to the longer-range future extending beyond the seven-year period of specificity, there might be a policy of locating this housing more widely throughout the community, closer to more centers of employment and public transportation. Such policies should be more than pious platitudes. They are intended to underlie and shape current decisions and should be abandoned when no longer relevant. They are maintained as conspicuously and up to date as quantified material; they are treated as "facts" in different form.[18]

Progressive Development

There is a limit, of course, to the core information and analysis which can be processed, maintained, and conceptualized for regular reference, study, and decision making. The information readily available, its reliability, the time required to revise the analysis or develop alternatives, personnel initially to establish and maintain the core analysis, its cost, and incomplete knowledge are all involved.

What is attempted and how this is organized and carried out is crucial to successful city planning, for decisions and actions are only as sound as the information and analysis on which they are founded. The information maintained and the exact ways of handling it will vary among cities, but basic requirements are presented in this report which must be met by all informational-analytical mechanisms for continuous city planning.

Only those data are incorporated which have the requisite reliability, can be updated as frequently as needed, are critical to the most important decisions to be made, and are understood and absorbed by those directly involved. Above all, additional information and further analysis are introduced into the core reference only as fast as they can be interrelated with the data and analysis currently considered. At all times, the total construct of material must be meaningfully interrelated analytically and presented clearly enough for decision makers to use it as their main means of evaluation and conclusion. More complete information and conclusive analysis support better planning only insofar as they meet the fundamental requirement of consistent internal correlation. A very simple construct of data properly correlated is preferable to more material which cannot be interrelated quantitatively or judgmentally. "Model simple, but think complex" is far superior to the opposite.[19] Any method of collection, storage, processing-manipulation, analysis, or display can be employed which contributes to meeting these basic requirements.

Form

How analytical material is formulated is important. Delineating the most influential elements of a city and quantifying their interrelationships can be a difficult task. Every possible clarification and simplification is needed by the staff to study and analyze the functioning of the city. It is also needed for legislative decision makers, who are not willing to act on the basis of staff analysis which they do not understand.

No responsible decision maker wants to act mainly on someone else's say-so. He cannot do so without in effect abrogating his decision-making role to a subordinate. When he is informationally or analytically dependent on another person, he is vulnerable to exaggeration, an unrevealed bias, or even deliberate deception. Increasingly, this is a serious problem confronting executive management generally, as knowledge becomes more compartmentalized and specialized and mathematical, often requiring more and more electronic computation understood only by the programmers. Frequently, the underlying assumptions of staff work are unstated.[20] This basic difficulty has not yet been resolved, and there is as yet no indication of how it will be. Until then, analysis must not be too complicated and incomprehensible for decision makers to understand.

In general, graphical forms are more readily comprehended than numbers. To illustrate, the familiar term "trend line" indicates the conclusion from experience that this graphical expression is the best way of presenting this information. Superposition of data or their placement side by side facilitates comparison. Any spatial separation of data requires the user to remember each figure as he refers to another. Memoranda and other written materials usually involve remembering one or several figures as one turns to related data as close by as the previous or following page. An awkward thumbing back and forth is often necessary, with fingers inserted between pages where interrelated data are shown. When such separated data number three or more entities, the average user will have difficulty maintaining clear recall and comparison.

Of course, forms should be chosen which do not introduce interpretive distortions such as improperly selected scales for ordinate and abscissa or presentations which imply that small numerical differences are meaningful when in fact they are not statistically significant. The key criterion of form is whether it makes comprehension and mental manipulation easier for the planning staff and—more importantly—for the decision makers whom they support. The core of information and analysis for continuous city planning must be directed specifically to the minds and understanding of those who make the final decisions. Otherwise, there can be serious abrogation of responsibility and grave consequences for democratic society; a computational elite could become the deciders in fact. Therefore, the form of the core of information and analysis is formulated to meet the needs of the ultimate decision makers, providing as clearly as possible that which can be comprehended, absorbed, and used.

Flexibility

Earlier in this discussion, the necessity of up-to-date city planning was emphasized. It is repeatedly observed by planners that city planning in the United States has been ineffective largely because the few components of end-state master plans which could be acted on become quickly outmoded, since redoing this type of fixed grand master plan can be afforded only every 10 years or so. Being closely current is essential to successful continuous city planning.

As shown in Figure 1, in the column entitled Recycle Time (Years, Months, Weeks), some information needs to be renewed more often than other data. Population and housing, as indicated, do not normally change so rapidly that they should be resurveyed more often than once every two years or so. This does not mean, of course, that population figures may not be changed more frequently in accordance with established growth trends. For some fast-growing communities, closely accurate population data might be needed once a year, if this information could be obtained at feasible cost. In the special situation of new towns, week-by-week population figures are needed because of the critical importance of cash flow—to check the sales-marketing program and construction schedule, project utility requirements, and forecast necessary financing.

By contrast, as indicated also in Figure 1, land-use and zoning information needs to be maintained up to date weekly. The dynamics of land-use development in the United States today are such that a change of zone on a single property can trigger a cascade of changes which drastically alter the character of the area from what was intended and formally planned. If some time in the future planned patterns are more rigorously preserved, land-use data may perhaps need to be brought up to date less frequently.

Another kind of flexibility required in continuous city planning is the capability of revising the core of information and analysis quickly. A natural catastrophe, an emergency situation, or an unexpected decision of major consequence may require immediate revision. Core information, correlations, and analyses must be recalculated in as short a time as a week or as long as a month, depending on the community and circumstances. Conscientious decision makers will not tolerate more time lag than is necessary or reasonable. Both ongoing and emergency types of revision should be borne in mind when formulating the process, procedures, and mechanisms of continuous city planning. These capacities to change are crucial.

Display

Besides gathering, correlating, and selecting the best form for core data with the necessary flexibility, how they are displayed is important. First, they must be readily available to those who make city planning decisions. Those with this responsibility cannot delay for hours, much less the days or even weeks they often wait with present-day city planning, until the background information they need is developed or found in some bureaucratic labyrinth of files. City planning commissions have been known to wait literally for years before information they wanted regularly before them when making certain decisions was made available. All parts of the core of information and analysis must be available in minutes for immediate decision, for contemplation, for staff study, or to inform an individual concerned, an interested group, or the general public.

Display units should be as uniform and consistent as possible to reduce the time required for their preparation and revision and also to facilitate comparison. A "standard module" of display provides the kind of advantage obtained from other applications of uniformity and regularity. The size of the module is limited by the need for it to be transportable. It should be easily transportable by one person from its permanent location not only to city council chambers, but to the offices of individual lawmakers, branch administrative centers in large cities, and elsewhere in the metropolitan region for meetings and display. City councilmen, other government officials, and private groups and persons may not wish or be able to come to the planning center but would be willing to receive material if it is brought to them.

Displays should therefore be lightweight and small enough to pass through a standard doorway and fit in the back-seat space of a full-size sedan. All things considered, a standard size of 36 by 52 inches is recommended. It may be desirable to have a few larger displays which can be carried through standard doorways but which require a small delivery wagon for transportation outside the home building. Displays must also be of such size that they can be shifted about readily within the mechanism of decision described below and illustrated in Figure 5.

The most important requirement is that displays not be typed, not be prepared in a drafting room, and not be printed. The delay inherent in typing and drafting is not fully recognized; it takes much longer than is assumed without time checks. The preparation of displays in a central drafting room requires an inordinate time because of laborious handwork and scheduling delays. Printing obviously takes considerable time under the best of circumstances.

None of these delays is acceptable in continuous city planning, which must permit as close to immediate revision as feasible. It is highly desirable that alternatives requested by decision makers be displayed within several hours, rather than days or weeks later when relevant material has faded in their memories and other matters have come to the fore. To meet these requirements, the preparation and revision of displays is done within or next door to the place where they are normally used. They are not sent out for preparation or processing. They are kept up to date and revised; alternatives are developed; and new displays are created in situ.

Another requirement often overlooked or taken for granted until too late is the design of displays so that they will "read" in black and white photographs. Reproduction in color is too expensive for the number of photoreproductions of core information and analysis displays needed for legislators, municipal managers, applicants, citizen groups, legal reference, and other uses and purposes. Although most staff members pay lip service to this requirement of clarity in black-and-white reproduction, far fewer take the steps necessary to see that it is attained. Much time and money are wasted redoing graphics to correct visual confusion when they are photographed. This cannot be tolerated in continuous city planning, because maximum conceptual clarity and early availability are basic.

Mistakes are avoided by keeping black-and-white photoreproduction of different display materials close at hand for reference when designing the display and selecting the materials to be used. Since color may be needed for some displays to distinguish visually between different elements which might otherwise become confused, black-and-white photoreproduction of different colors is also maintained as a standard reference. If the display is to be reproduced and printed in color, a printer can suggest the best selection and separation of the different colors.

Figure 2 reproduces portions of several types of display meeting the above requirements. They were made as core information for planning the western operations of a large corporation in the United States, but the methods of display are equally applicable to municipalities. The following items correspond to the numbered portions of Figure 2:

1. *Tabular chart.* Menu-type display board with black felt covering; plastic numbers and letters inserted in continuous horizontal "cuts" or indentations; elastic-cord lines; stick-on letter title. This display could be used in continuous city planning to analyze the source and application of municipal funds. Part 7 of this figure is another way of expressing the same relationship, but with less emphasis on exact numbers and more on comparison by category.

2. *Graph.* Masonite panel with permanent grid of light white lines, silk-screened beneath a glazed finish to provide a standard reference scale, horizontal and vertical straight lines, and otherwise to facilitate design and layout directly on the display panel. These are standard panels used for this type of graphic display; applied stick-on letters, numbers, and lines (removable tapes). In a city, this type of display could be used to interrelate trend lines and other phenomena—for example, available dwelling units of different kinds and several categories of population growth.

3. *Movable bar chart.* Magnetic display panel; cardboard segments with small magnets on back and removable tapes on front surface; applied stick-on letters. Could be employed to study the relative numbers of different categories of zoning planned in different neighborhoods, communities, or municipalities. The highly flexible form allows rapid rearrangement and study by staff or decision makers.

4. *Bar chart.* Standard masonite panel with permanent grid; applied stick-on letters and removable tape.

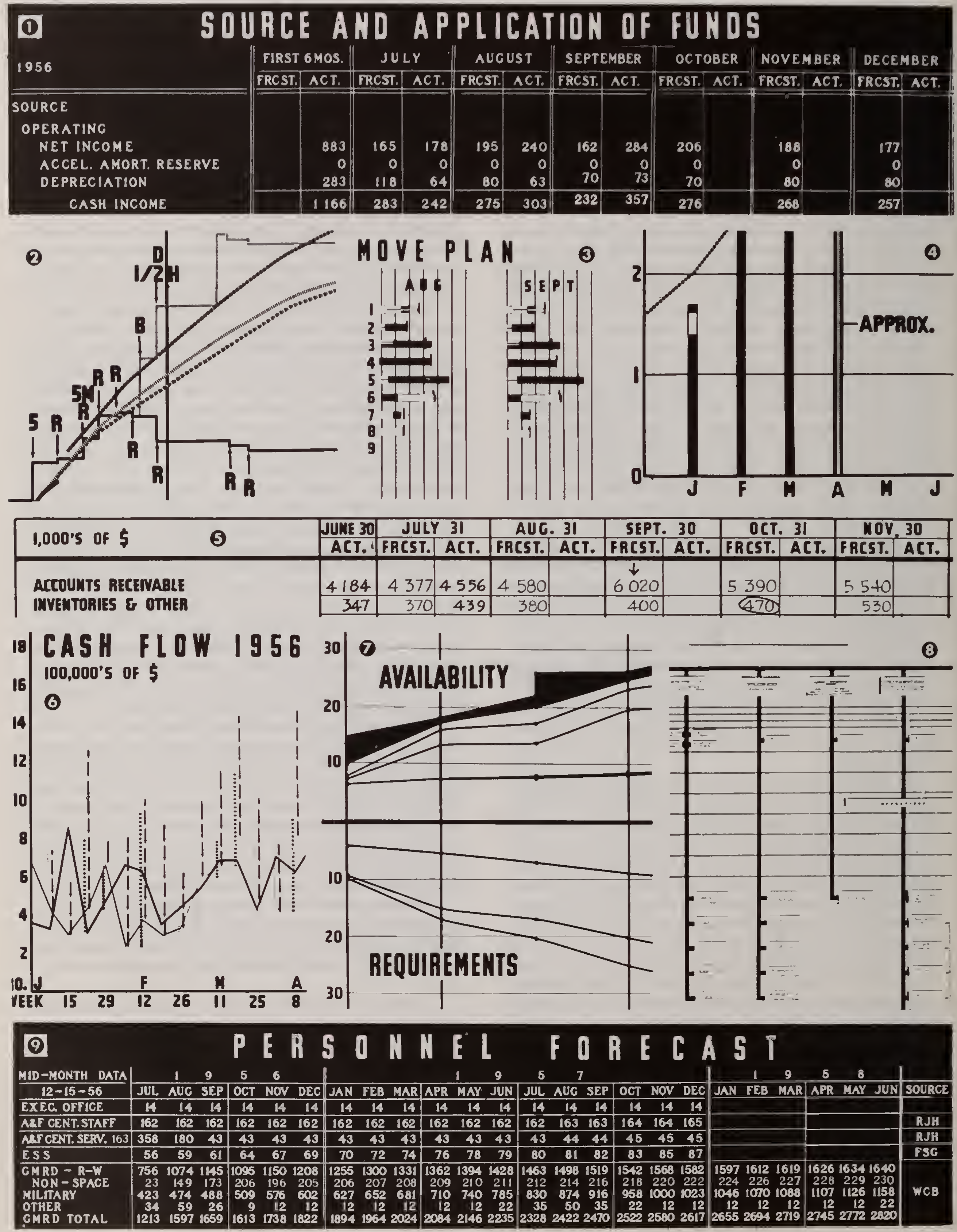
5. *Tabular chart.* Standard masonite panel with permanent grid; applied stick-on letters for headings; quantities written in with pen and ink which can be wiped clean with solvent. Informal notations can be made by decision makers or staff, as shown by the arrow and circle. This display is useful for analyzing actual and projected city planning data when frequent and easy revision is desirable, with immediate informal notations. It is midway between a menu-type display (items 1 and 9) and a blackboard surface.

6. *Graphic formulation.* Standard masonite panel with permanent grid; applied stick-on letters and removable tape. Might be employed to compare budgets with requests and expenditures of funds by municipal departments over a period of years.

7. *Graphic formulation.* Standard masonite panel with permanent grid; applied stick-on letters and removable tape; applied cutout from halftone sheet.

8. *Movable organization chart.* Magnetic display panel; cardboard segments with small magnets on back and typed labels on front surface; removable tape. Excellent for studying and displaying municipal organization for continuous city planning or an arrangement for citizen participation in the development or revision of district or neighborhood plans.

FIGURE 2. ILLUSTRATIVE FORMS OF DISPLAY



① SOURCE AND APPLICATION OF FUNDS

1956	FIRST 6 MOS.		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.
SOURCE														
OPERATING														
NET INCOME		883	165	178	195	240	162	284	206		188		177	
ACCEL. AMORT. RESERVE		0	0	0	0	0	0	0	0		0		0	
DEPRECIATION		283	118	64	80	63	70	73	70		80		80	
CASH INCOME		1 166	283	242	275	303	232	357	276		268		257	

1,000'S OF $ ⑤	JUNE 30	JULY 31		AUG. 31		SEPT. 30		OCT. 31		NOV. 30	
	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.	FRCST.	ACT.
ACCOUNTS RECEIVABLE	4 184	4 377	4 556	4 580		↓ 6 020		5 390		5 540	
INVENTORIES & OTHER	347	370	439	380		400		470		530	

⑨ PERSONNEL FORECAST

MID-MONTH DATA 12-15-56	1956						1957												1958						
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	SOURCE
EXEC. OFFICE	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14							
A&F CENT. STAFF	162	162	162	162	162	162	162	162	162	162	162	162	162	163	163	164	164	165							RJH
A&F CENT. SERV. 163	358	180	43	43	43	43	43	43	43	43	43	43	43	44	44	45	45	45							RJH
ESS	56	59	61	64	67	69	70	72	74	76	78	79	80	81	82	83	85	87							FSG
GMRD - R-W	756	1074	1145	1095	1150	1208	1255	1300	1331	1362	1394	1428	1463	1498	1519	1542	1568	1582	1597	1612	1619	1626	1634	1640	WCB
NON-SPACE	23	149	173	206	196	205	206	207	208	209	210	211	212	214	216	218	220	222	224	226	227	228	229	230	
MILITARY	423	474	488	509	576	602	627	652	681	710	740	785	830	874	916	958	1000	1023	1046	1070	1088	1107	1126	1158	
OTHER	34	59	26	9	12	12	12	12	12	12	12	22	35	50	35	22	12	12	12	12	12	12	12	22	
GMRD TOTAL	1213	1597	1659	1613	1738	1822	1894	1964	2024	2084	2146	2235	2328	2422	2470	2522	2580	2617	2655	2694	2719	2745	2772	2820	

9. Tabular chart. Menu-type display board with black felt covering; plastic numbers and letters inserted in continuous horizontal cuts or indentations; elastic-cord lines; stick-on letter title.

Picturization

Since the core of information and analysis provides the representation or simulation necessary for continuous city planning, the municipality must be portrayed or pictured in ways which are sufficiently representative of its reality to permit meaningful study and valid conclusions. A map shows ground features of the city at uniform scale and correct spatial interrelationships. Statistical tabulations depict population characteristics, municipal costs, retail sales, or other facts or trends numerically descriptive of the city. Instruments measure air, water, and ground pollution. Descriptive writing may be the best way of expressing certain urban features and developments. In each case, an aspect of the city is being simulated by the most appropriate form of representation or statement.

The three-dimensional, physical, visual reality of a city is, of course, an essential manifestation of its existence and a root consideration in its planning. It is the physical body within which the multitude of component parts of the municipality function. In turn, it represents in its anatomy and form the forces exerted by these many constituent parts and those exerted on the city from outside its borders by region, state, nation, and international situations. The interrelationship between urban form and pattern and land use, transportation, environment, services, municipal costs, urban aesthetics, and every other aspect of city life is well documented in the literature of city planning.[21]

What is not well known is the dependence of city planning staffs, commissions, and legislative decision makers on their personal visual memory to picture this physical city:

"All matters which an individual reviews and decides upon are referred to his mind and memory—what might be called his personal internalized simulation, the product of accumulated observations, experience, formal knowledge, and thought. . . . The accomplished decision maker in city planning visualizes a plan picture of the metropolitan region as a whole, as it would appear from an aircraft high above. This internalized view is derived from direct observation on the ground or from the air, from maps and photographs. . . ."[22]

However, except in small places, a person cannot recall to mind a memory image of every part and prospect of the community; there is too much to be seen and remembered. Certainly, in larger cities and those changing rapidly, only a fraction of the visual scene can be recalled to mind. Maps assist in this recall, but they supply only additional two-dimensional cartographic information. Even if a city is examined in perspective from a tall building or nearby hilltop, most of the street pattern and many other features are hidden from view by intervening structures and terrain. Of course, much less can be seen standing at one point or several within a community. City planning staff, commissioners, and legislators cannot visit every site involved in their many decisions, nor is it practical to provide them with sufficiently descriptive photographs of every location. As a consequence, city planning in the United States has proceeded half blind.

Aerial photography can provide a visualization of the three-dimensional reality of the municipality which can be acquired in no other way and which is essential for urban analysis and many city planning decisions. Although its view of the city from above is an unusual and partial one, it is the closest approximation to a complete picturization available. There are features which are not shown from above because they are beneath an intervening structure or vegetation, too small to be detected at the photo scale, or otherwise obscured or unseen, but every form of visual and photographic observation is incomplete. Those unfamiliar with aerial photographs must spend a while becoming familiar with the overhead viewpoint and learn to read and interpret with ease the large amount of information they contain. Besides this information, the photographs act as triggers to recall to view within the conscious mind various scenes in different parts of the city stored unremembered in the individual's memory.[23]

If new aerial photographs are taken every six months or every year, this most important visual simulation is kept closely current for continuous city planning, and a record is accumulated which may reveal trends and support urban studies. Figure 3 shows a standard aerial photographic panel, which would be installed in the wall recesses shown in Figure 6. Figure 4 illustrates photographic coverage of the entire 465-square miles of the city of Los Angeles, and Figure 6 is a drawing depicting the mechanism of analysis and decision.

The surface of the standard aerial photographic panels, such as the one shown in Figure 3, is sprayed to allow tapes and stick-on letters to be applied and removed repeatedly without damaging the photoemulsion. When a site shown is under planning consideration, its boundaries can be delineated with thin tape, surrounding zones shown with stick-on letter designations, or other information called to attention in various ways. A transparent flap showing a proposed development in outline can be attached to the aerial photograph view of the area as it exists and dropped in place to indicate from an overhead viewpoint how the project would fit its immediate surroundings. In many different ways, these photographic panels can be employed for particular purposes over and above their basic purpose of visualizing the physical city for decision makers.

City Planning Center

Information, analysis, and displays are brought together in a primary place and mechanism specifically designed for collection, preparation, use, and decision. Figure 5 shows two analysis planning centers developed by large corporations. Figure 6 portrays such a center as it might be developed for a large city with an adequate budget for city planning. Los Angeles, California, is the city selected as a realistic example. Mechanisms for the same purposes and with comparable primary features can be developed in much smaller space and with much less sophisticated display. It is the concept of continuity which is crucial. It has been and can be applied in a very limited, informal, even out-of-the-briefcase fashion if this is all that is possible

FIGURE 3. PHOTOGRAPHIC ANALYSIS—DISPLAY PANEL

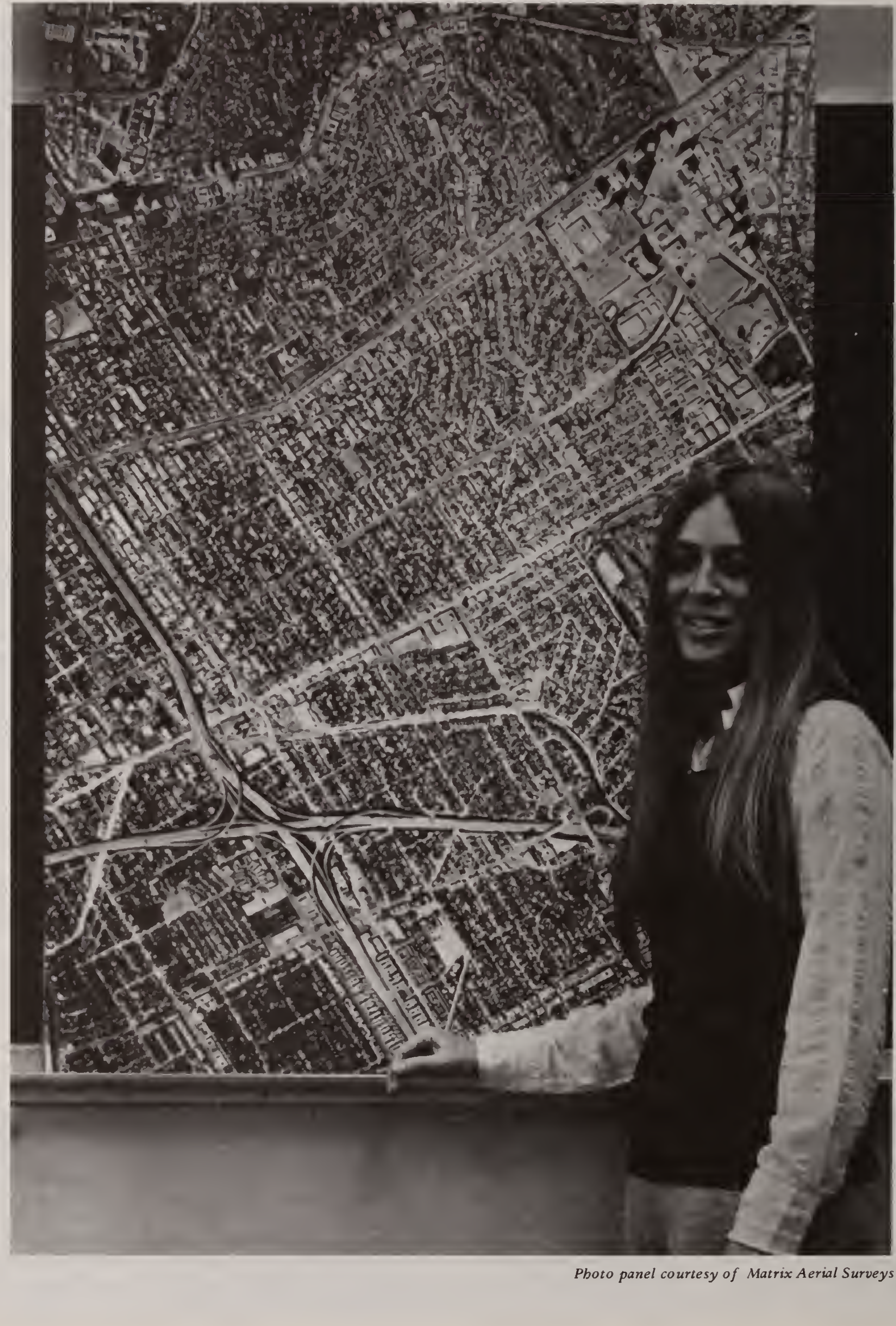


Photo panel courtesy of Matrix Aerial Surveys as a beginning. However, any city the size of Los Angeles deserves such a mechanism; even modest improvement in municipal planning, management, and decision making will many times repay its relatively low cost.

In the main part of the installation, as shown in Figure 6, discussants, participants, and audience are surrounded on three sides by walls with sliding displays containing core information and analysis. The recommending or decision-making body (city planning commission, committee of city council, or city council if not too large) and several members of the planning staff are on a slightly raised dais at the end of the room, opposite the projection room and doorways on each side of it. As shown by the dashed lines at the left center of Figure 6, two sections of the analysis-display wall beside those on the slightly raised platform swing out for easier viewing by those seated in the fixed seats and by those on the dais. The fixed seats are wide enough or swivel to allow the audience to turn partly to either side and view the side walls more directly. The side aisles are wider than usual to allow small discussion groups to stand comfortably in front of analysis-display panels in the side walls.

Next to this auditorium and connected by the door at the rear of the dais is space for the maintenance of the core of information and analysis and official master plan, staff study and meetings, development of new displays, temporary storage of panels, and computer terminal. Here, staff groups large or small can meet while the main room is in use, and people from other levels of government or visitors from abroad can gather for working and explanatory sessions of many kinds. It is here that studies are made which are analytically tentative or exploratory only and should not be seen and construed as a serious consideration, intention, or proposed alternative. To this extent, the staff room can serve appropriately as restricted staff study space.

Connected with this staff study space is the third smaller room specifically for maintenance of the master plan. Here, desks and files are arranged to facilitate work directly on analysis-display panels as they stand in the wall space built to contain them. By making and maintaining the displays directly on the panels in this upright position, transporting the panels to and from a drafting room—a source of inflexibility, inevitable delays, and higher costs—is avoided. It reinforces the fact that continuing analysis is conducted here, utilizing information, departmental plans, and other materials flowing to and from the planning center. In this maintenance office, panels are photographed and filed as needed for the official, legal, master plan record.

It will have been noted in examining Figure 6 that provision for analysis-display panels is made in most walls throughout the installation. They contain tracks above and below with rollers at intervals making it easy to slide the panels back and forth. Since there can be as many as six tracks, transparent or overlay-type panels can be slid in front of an opaque base or reference panel behind. Or a number of panels of any sort can be placed side by side in the same or adjacent tracks. Many superpositions or groupings of the analysis-display panels are possible without removing them to different tracks, but the wall recesses are designed so that the analysis-display panels can be shifted easily from one track to another.

The walls of both sides of the auditorium room are designed so that panels may be put in place and moved by a person standing on either side of the wall. Thus, staff can change the panels facing the fixed seating from the staff space on the other side of the analysis-display wall separating it from the auditorium room. Or they can reach through and reverse panels which have been used in the main room for reference and study from the staff study space. Similarly, panels can be shifted freely in the opposite analysis-display wall between the auditorium room and the side corridor so they can be viewed from either side. In this way, analysis-display panels can be used to provide advance information to people in the corridor outside concerning matters coming up for discussion or decision. Or the wall as viewed from the corridor can contain changing exhibits drawn from the master plan.

As shown in Figure 6 toward the upper right, wall storage is provided for approximately 170 analysis-display panels which are not being used or kept in the wall recesses. These include material which is used only occasionally, historical data helpful in determining trends, and a supply of unused panels. Another storage space between the staff study and master plan maintenance rooms is for oversized panels twice as wide as the standard module of three feet. These are needed for certain statistical data shown separately for a number of years extending from some time ago into the future.

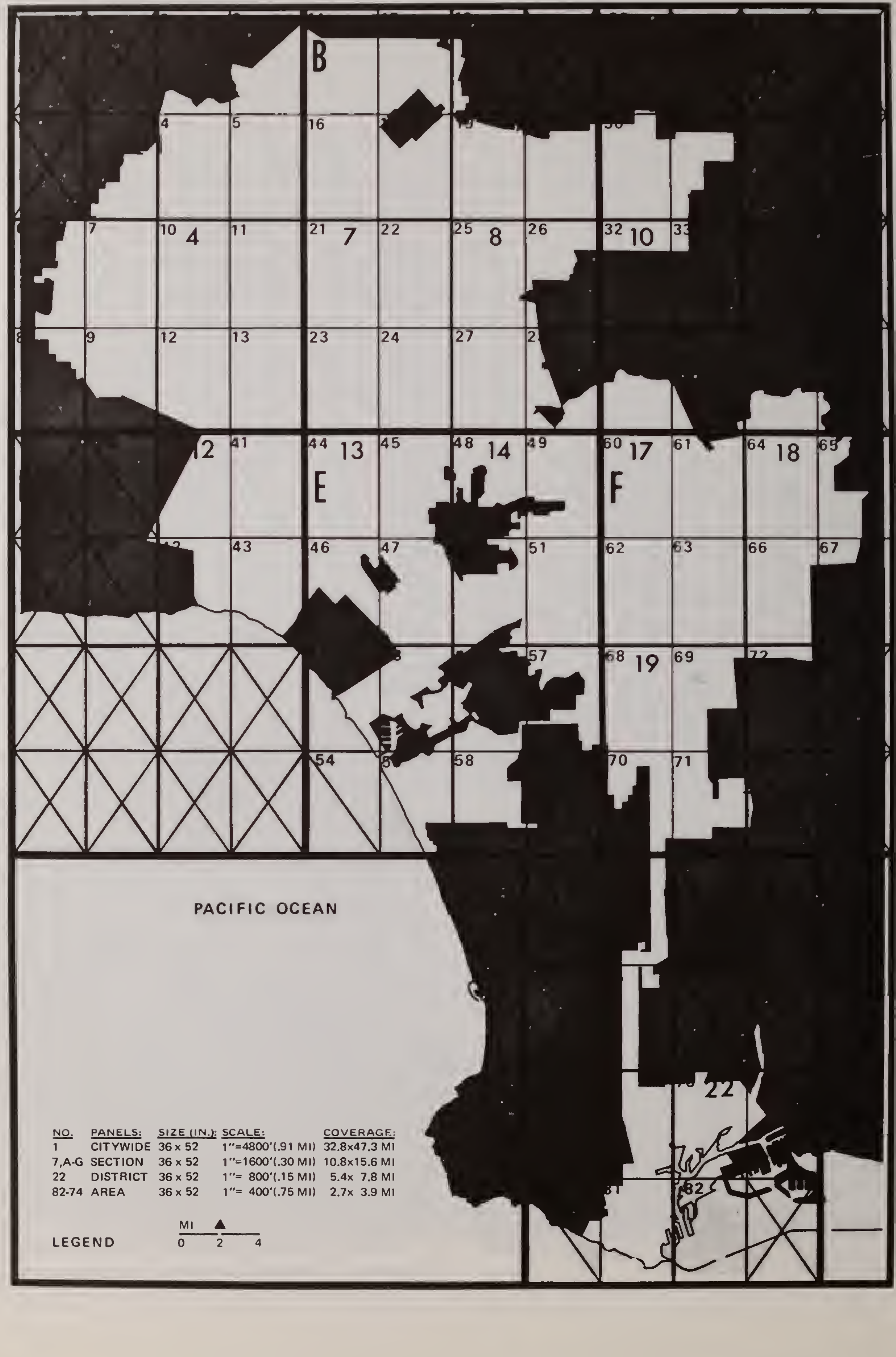
At least 300 standard-size panels can be displayed and stored within the installation illustrated in Figure 6. If ease of rearrangement were sacrificed by filling the wall-recess tracks to capacity, over twice this number could be maintained. As discussed below and demonstrated in part by Figure 4, 200 panels would probably be the maximum needed and feasible for continuous city planning for Los Angeles. As pointed out previously, small communities would have not only much smaller and more modest installations but far fewer analysis-display panels as well.

Locations are shown for computer consoles or terminals in both auditorium and staff study rooms. As time passes and more information can be absorbed and utilized effectively in the process of city planning and analysis, computer consoles can be used for data storage, retrieval, processing, display, and calculation. The information could be projected on movie-size screens so that it could be seen by everyone in each room.

In time, the entire mechanism depicted in Figure 6 may be replaced by high-speed electronic analysis and display, but not before decision makers can absorb and use it. The efforts of computer scientists and related business enterprises to upgrade governmental decision making have been notably unsuccessful. In the main, this is because of lack of understanding of the nature and complexity of cities, of governance in a democracy, and of the capabilities, limitations, and responsibilities of human decision makers in the real world. The mechanism described here represents the next generation of advancement in governmental management and planning. It will probably be used and developed for the next generation before highly computerized systems can be adopted for city planning.[24]

The analysis-display panels are of two types: opaque and transparent. The latter, of course, slide in front of other

FIGURE 4. ILLUSTRATIVE PHOTO COVERAGE OF A LARGE CITY



NO.	PANELS:	SIZE (IN.):	SCALE:	COVERAGE:
1	CITYWIDE	36 x 52	1"=4800'(.91 MI)	32.8x47.3 MI
7,A-G	SECTION	36 x 52	1"=1600'(.30 MI)	10.8x15.6 MI
22	DISTRICT	36 x 52	1"= 800'(.15 MI)	5.4x 7.8 MI
82-74	AREA	36 x 52	1"= 400'(.75 MI)	2.7x 3.9 MI

panels to permit direct comparison of information by this visual superposition. Provided the information shown on one transparent panel does not prevent seeing through it to the next panel behind, as many as four of these superposed panels may be correlated. Opaque panels can be hard-surfaced to receive stick-on graphic materials which can be changed over and over again; or grease pencils and wick pens can be used which can be erased easily (Figure 1:5). A reference grid can be silk-screened on these panels to facilitate organizing information on its surface (Figure 1:2, 1:5, 1:6, 1:7). Panels can be surfaced with metal so that materials with attached magnets may be moved about on the vertical surface almost as easily as on a horizontal surface (Figure 1:8). When easy arrangement and trial placement assist the analysis, magnetic panels are helpful.

"Menu" boards are a type of opaque panel especially suited for statistical arrays of many kinds. With reusable plastic letters and numbers, this information can be quickly set up and kept up to date (Figure 2:1, 2:9). As has long been recognized in research and development, panels with a blackboard or greenboard surface for chalk crayons are uniquely suited to chalk talk or the instantaneous expression or notation which is so important when exploratory analysis is undertaken. If fatigue or the end of the workday interrupts the exploratory analysis, the study material on the blackboard panel can be stored away until the next day or whenever work is resumed. In some study rooms, an entire wall is made available for use as a blackboard, providing the very large surface needed at times for the spatially uninterrupted formulation of an idea or for working out a complex program or procedure. This could be provided on the surface of several of the back walls in the analysis-planning center.

How a city can be divided for its photographic representation on analysis-display boards is shown for Los Angeles in Figure 4. Since Los Angeles covers one of the largest municipal areas of any city in the world—465-square miles—it is a rigorous test of the practicality of photo coverage at a scale which permits identification of individual 50- by 100-foot lots but does not require an impractical number of separate panels. Each rectangle in Figure 4 without a diagonal line or lines is a portion of the city portrayed on a panel 36 by 52 inches. The smallest rectangles are enlarged the most to fill the surface of the panel and are therefore at a larger scale than the rectangles encompassing larger areas of the city, which must be at a smaller scale to fit on the panels. The following table taken from Figure 4 shows the number of panels required to depict the city cartographically at four different scales and with different ground-area coverage.

Designation	Number Needed	Panel Size (In.)	Scale	Ground Coverage
Citywide	1	36 x 52	1 in. = 4,800 ft. (0.91 mi.)	32.8 x 47.3 mi. (1,551.4 sq. mi.)
Section (A-G)	7	36 x 52	1 in. = 1,600 ft. (0.30 mi.)	10.8 x 15.6 mi. (168.5 sq. mi.)
District (1-22)	22	36 x 52	1 in. = 800 ft. (0.15 mi.)	5.4 x 7.8 mi. (42.1 sq. mi.)
Area (1-82)	74-82	36 x 52	1 in. = 400 ft. (.075 mi.)	2.7 x 3.9 mi. (10.5 sq. mi.)

Naturally, as the scale increases, the number of panels needed to cover the entire city increases also. Thus, at the largest scale suggested above (1 inch = 400 feet), between 74 and 82 panels are required to portray the entire city photographically. Which one of these two numbers is needed depends on whether small areas of the city left over from an adjacent panel are shown as an insert or supplement on this same panel, or whether another entire panel is used to display the very small area. Figure 4, placed where this choice exists are indicated by a single diagonal line in the rectangle, for example, numbers 38, 39, 54, and 73. The rectangles with two crossed lines are not part of the master plan because they are beyond the city limits, but they are part of the surrounding metropolitan region.

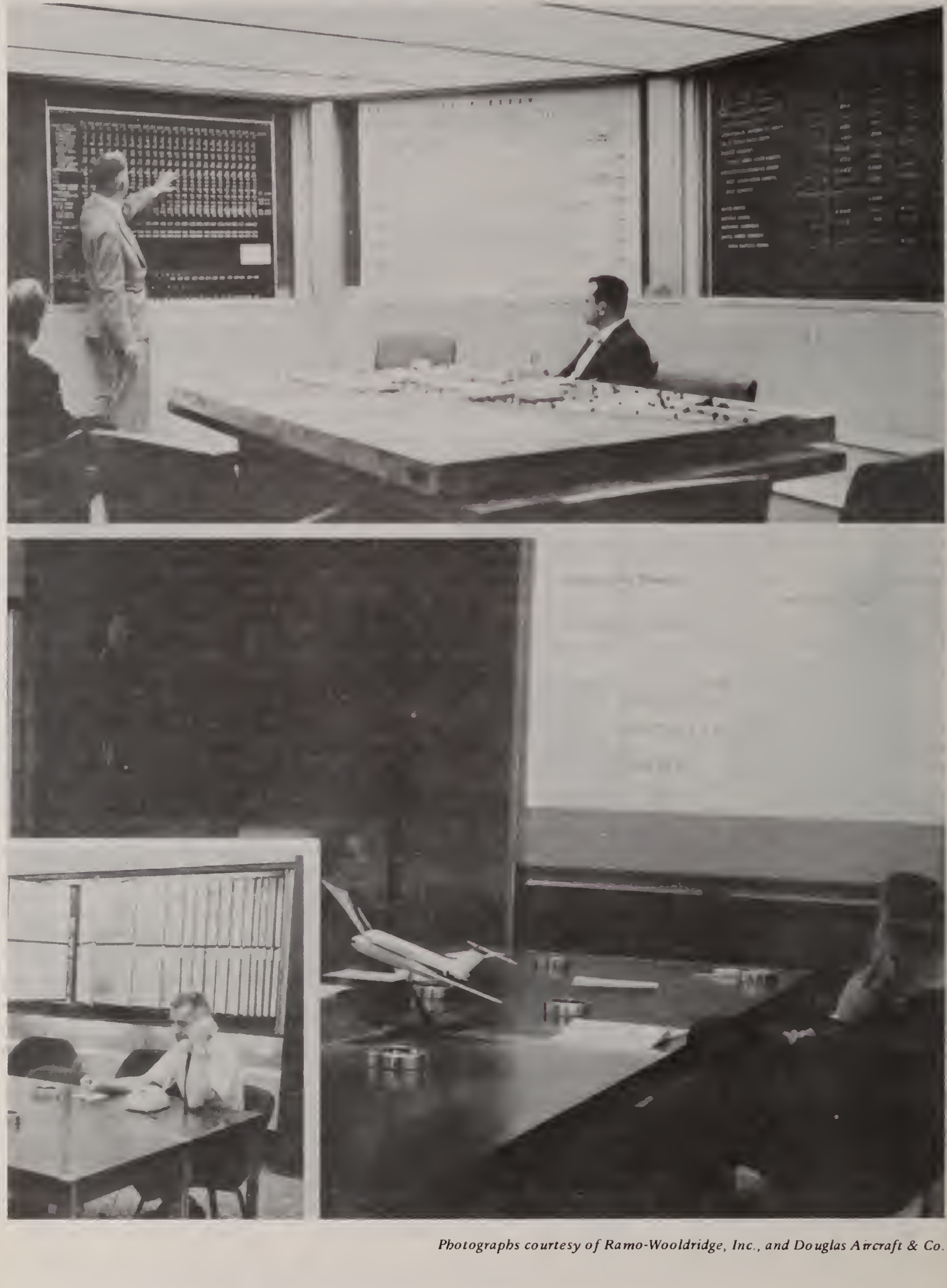
Citywide panels would naturally be used to view and analyze the municipality and its elements as a whole: transportation, utility, and facility systems; land-use pattern; centers of activity and growth; and metropolitan-regional developments affecting the city. Panels showing the city in seven Sections permit the greater detail possible at a scale three times as large and still include enough ground area (168-square miles) for various subsystems to be shown and studied. Area panels provide the largest scale and the level of detail needed for zoning and other decisions involving individual properties of small size. The panel shown in Figure 4 is an Area panel.

Since each of the Area panels displays only 10-square miles, so many of them are required to cover the entire municipality that it is not feasible to maintain more than one such set of between 74 and 82 panels—not only because they must be brought up to date regularly, but because of cost, storage space requirements, and the importance of quick accessibility. When scale and coverage intermediate between those of the Section and Area panels are needed, the city can be shown additionally by 22 District divisions. Most cities require far fewer analysis-display panels than Los Angeles.

Figure 1 illustrates how core information and analysis could be displayed on opaque or transparent panels and at what scale and coverage. For the most part, it is suggested that opaque panels comprise the background for transparent overlay panels containing most of the information which is revised regularly. In this example, District panels are not used. Recycle times vary from weekly to yearly, depending on the need for closely up-to-date information, its availability, and its cost. Also indicated in Figure 1 are the areal or spatial units for which information is maintained and the projections and historical data which are also shown.

Some panels carry statistical arrays and other graphic

FIGURE 5. CORPORATE ANALYSIS CENTER



Photographs courtesy of Ramo-Wooldridge, Inc., and Douglas Aircraft & Co.

expressions such as trend lines, bar charts, and the like. Also identified are the correlations among different categories of core information which are most useful in observing, analyzing, and planning the city. Some of these correlations would be shown by placing one or more transparencies one above the other or in front of an opaque base panel. Others would be maintained by statistical comparison, ratio analysis, mathematical models, and other methods. The illustrative information for a very large city shown in Figure 1 requires 81 opaque panels, 158 transparent panels, and 4 for statistical arrays—a total of 162.

Legal Instrument

Municipal master plans, as now formulated in the United States, are recommendations by city planning departments and commissions to their legislatures to enact the laws required to put the plans into effect. The response of the legislative body can range from complete rejection to formal adoption, giving the master plan legal status as an acknowledged reference. Thus, those creating or concerned with the physical development of the city—for example, land developers, municipal agencies, and citizens' associations—have more cause to challenge council actions violating a master plan just adopted than if no such reference had been acknowledged.

The legislature is not obligated to follow a master plan unless it deliberately binds itself to conform. And, of course, this commitment can be changed if the legislature overrides its own self-imposed restrictions favoring adherence to the plan. Whether lawmakers and other elected officials regard the master city plan as a firm commitment or flexible guide depends on the political significance of the planning matter at hand. Other things being equal, the elected official will maintain the maximum freedom of choice and the least commitment. Planning departments, on the other hand, usually seek to make their master plans unalterable, except in their details, for as long as possible.

Land developers, special interest groups, and the individual citizen also tend to regard the master plan as sacrosanct when it supports their desires of the moment, but as a very general guide in need of correction or revision when it does not.

Because of these attitudes, the master plan is not yet institutionalized as a fundamental and formal part of municipal government, as desirable and necessary as the budgeting process and responsive to existing law. As they now exist, master city plans do not represent what the community will accept as a definite commitment, but rather what the city planning staff thinks people should accept for their own future good. Until plans are brought into closer coincidence with what people really want and will support, they will remain legally and institutionally indefinite.

City planning departments and commissions can use their master plan as the basis for their own actions and recommendations. City councils will probably find them increasingly necessary for technical-engineering coordination; to solve problems of transportation, land use, or environmental quality which require broader consideration and long-range programs of progressive action; and as a political commitment demanded by the electorate. In time, the master city plan will serve as the essential instrument for discussing and deciding relative values and purposes, signifying the intentions of the community, indicating the allocation of available resources among competing demands, and outlining programs of action.

Master city plans are composed of documents covering different elements of the city which can be considered and acted upon together and which are intended to last for some time. Or they may be developed by a gradual accumulation of different parts, separately adopted over a period of years. They are maintained in some municipal office as legislative, legal, and operating reference. The materials constituting the plan vary widely from city to city. State enabling acts may require that certain elements or subjects be included; but because the content or methods of analysis are not prescribed, the treatment may be usable or useless.

One characteristic of almost all city plans in the United States is that they are not current. Council actions approving, denying, or modifying the plan are not shown or reflected in its printed publication for months or even years. In fact, the time required for preparation and production precludes any published plan from being strictly up to date unless no actions whatsoever are taken while the plan is being published. Of course, this is unrealistic and unlikely.

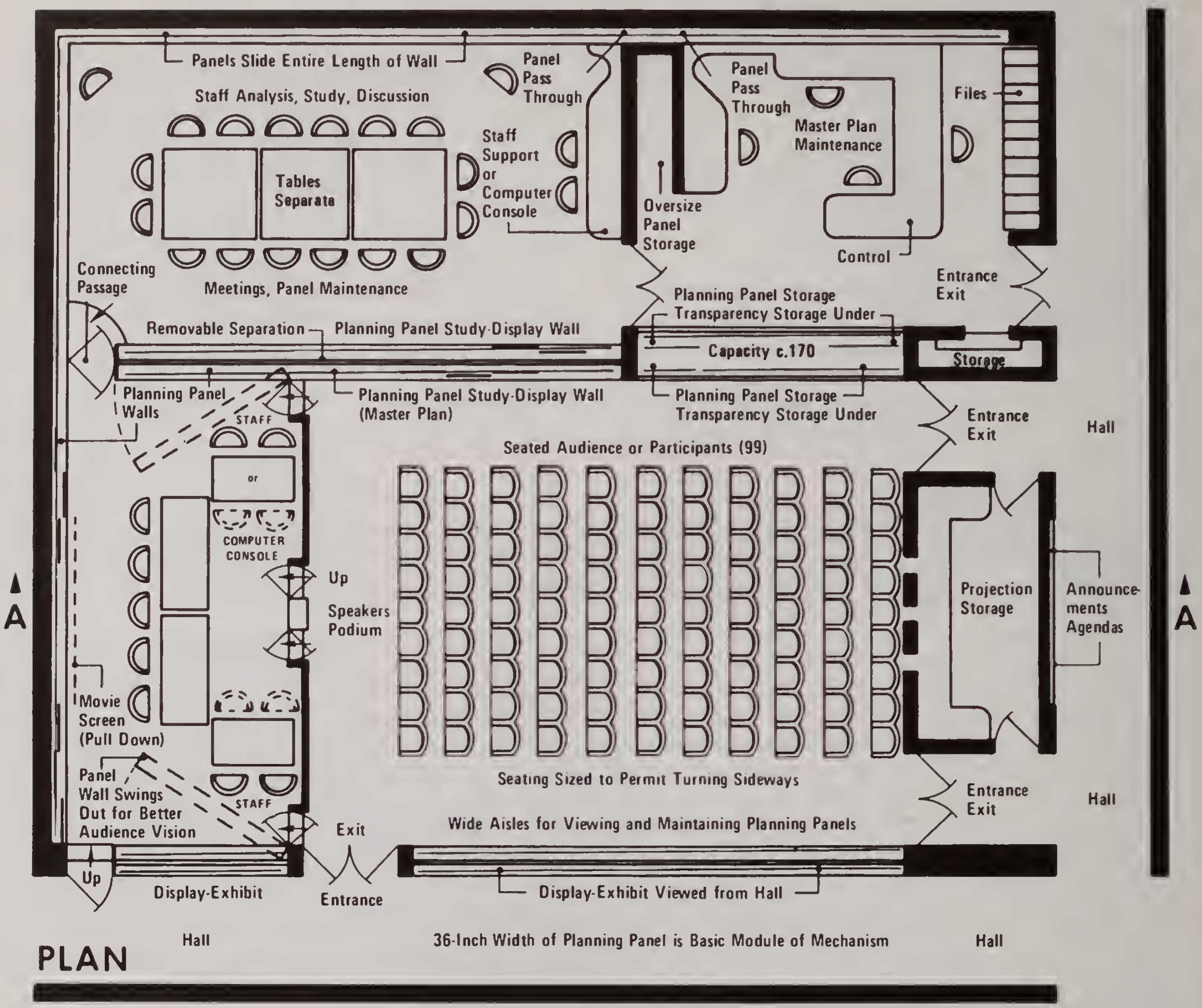
On the other hand, if the master plan is so general that a series of changes does not affect it, there is serious question whether it is really an effective guide at all. The dynamics of urban development in the United States almost guarantee that certain changes in land use call for changes in plans for the surrounding area. Some violations can have even more widespread and disruptive consequences. It is also almost equally certain that political and economic realities will prevent rigorous adherence to master city plans for years to come.

Any legal difference between city planning as practiced today and continuous city planning as proposed in this document is a matter of degree and not of kind. The main difference is that the legal reference in continuous planning is not a printed master plan but the recorded content of the city planning center. This includes information on analysis-display panels in use or in storage, photographic records of this information and analysis previously existing and formulated, and related legislation. The official legal master plan is that part of this material which has been adopted by the proper authority for this purpose.

Identification of the master plan at the time of a particular request, action, or decision is made by a well-organized system of reference to photographic reproductions of analysis-display panels on microfilm and to other records representing the master plan at a particular time. Essentially this is what happens today, except that continuous city planning involves keeping track of more frequent changes.

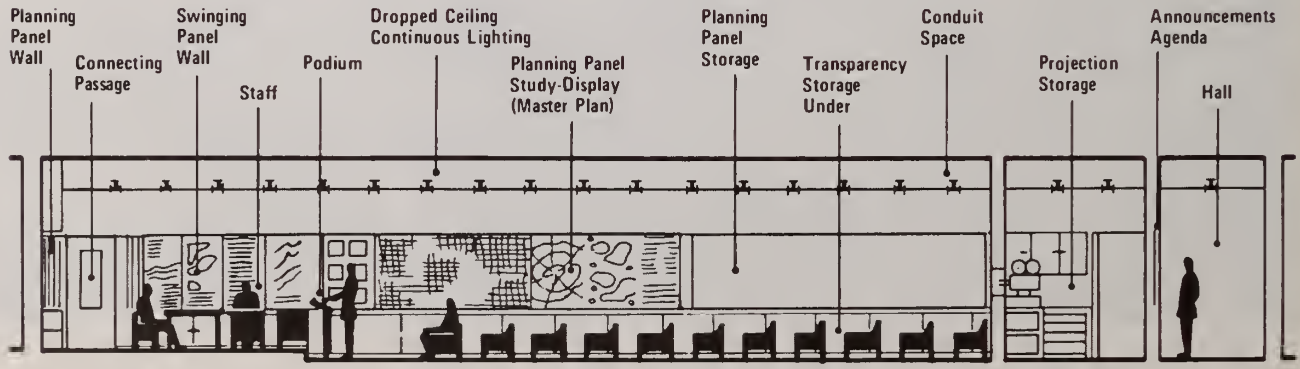
If a document showing the master plan is needed, it is produced by photographing the analysis-display panels and other records which depict it. These materials can be published as a printed report, but this expense should certainly be justified by some worthwhile purpose served only in this way.

FIGURE 6. CITY PLANNING CENTER



PLAN

Panels Slide Entire Length of Wall
Staff Analysis, Study, Discussion
Tables Separate
Panel Pass Through
Staff Support or Computer Console
Panel Pass Through
Master Plan Maintenance
Files
Oversize Panel Storage
Control
Connecting Passage
Meetings, Panel Maintenance
Entrance Exit
Planning Panel Storage
Transparency Storage Under
Removable Separation
Planning Panel Study-Display Wall
Capacity c.170
Storage
Planning Panel Walls
Planning Panel Study-Display Wall (Master Plan)
Planning Panel Storage
Transparency Storage Under
Entrance Exit
Hall
STAFF
Seated Audience or Participants (99)
or
COMPUTER CONSOLE
Up
Speakers Podium
Projection Storage
Announcements Agendas
A
A
Movie Screen (Pull Down)
Panel Wall Swings Out for Better Audience Vision
STAFF
Seating Sized to Permit Turning Sideways
Entrance Exit
Hall
Exit
Wide Aisles for Viewing and Maintaining Planning Panels
Up
Display-Exhibit
Entrance
Display-Exhibit Viewed from Hall
Hall
36-Inch Width of Planning Panel is Basic Module of Mechanism
Hall



SECTION A-A

Legal requirements for city planning are met as successfully by continuous planning as by traditional planning. It is important, however, to substantiate that the more frequent changes involved in continuous planning are not arbitrary with respect to any particular matters, but reflect new information, further analysis, or conditions or events calling for revision. This substantiation is best accomplished by carefully following planning procedures which provide or support proper notification, hearings, reasonableness, consistency, due process, and public purpose.

Strategy of Use

In the United States, planning faces fundamental difficulties inherent in the body politic, its elected representatives, and society in general. Some of these difficulties are broad and basic.

Recognizing and facing reality is fundamental to planning. Yet, it is difficult for man to face unvarnished facts and unpleasant truths and to avoid wishful thinking. People naturally prefer the comfort of an illusion to the nagging worry of a troublesome situation. Constant awareness of the accumulation of problems which are ever present is more than a person can endure; understandably, he sees no reason why his existence should be so oriented and burdened. But the task of planning is precisely that of evaluating the real situation, however unpleasant, and identifying problems and potential improvements.

It is not innately easy for people to forego present needs and desires for future benefits which they cannot enjoy because these benefits will accrue to the next generation. Coordination does not come easily to people. Psychologically, man tends to be a lonely island; biological and social bases for cooperation evolve slowly and often painfully. Inevitably, coordination implies less selfishness, an achievement which it has been amply demonstrated is not easily attained. Yet not only cooperation, but close synthesis, is basic to planning.

Planning requires consideration of the distant and indefinite future, as well as today and its immediate extension—a concept supported indirectly in the past by much more widespread concern with the hereafter. But man prefers certainties to uncertainties, a bird in the hand to several in the plan. In general, he resists perpetual and extensive change; a minimum stability is necessary to avoid confusion and intolerable indefiniteness.

Planning sets higher standards, calls for continuous improvement, and requires greater effort. To the average individual, it seems easier to plan as little as possible rather than as much as suggested. Planning presupposes and requires a reasonable triumph of rationality over instinct and emotions, of order over disorder, of constructive hope over discouragement or fatalism.

Hope based on man as he really is has better cause to spring eternal than hope founded on delusion or fanciful thinking. City planning is a constant struggle against human traits, societal features, and other realities which require it to be a gradual, relentless process. It is this continuing analytical process which is the actuality, not master plan publications or any other part of the process. Incremental advance, not rapid or radical change, is the normal expectancy. Undertaking too much too quickly prevents significant achievement on the smaller, cumulative scale of reality; it can also discredit planning in the eyes of its decision makers, beneficiaries, and other beholders.

City planning in the United States is many things, but analytically and operationally it is most analogous to a never-ending game of chess played against tough opponents, requiring the strategy, plans, and tactics of a grandmaster to win.[25]

In light of these realities, neither the municipal citizenry nor its elected representatives can be expected to embrace any form of effective city planning with instant and enduring enthusiasm. Politicians may be enthusiastic temporarily if planning can help them in some difficult situation. At one extreme, they may request city planning studies, not because they want the results for guidance but because they believe that during the period when the studies are being made the troublesome issue will be forgotten or diverted.

Normally, the politician and, increasingly, the governmental civil servant do not want to commit themselves more than is forced on them or more than they elect in their own self-interest after very careful thought. The more numerous and varied are their options, the more room there is to maneuver in the arena of political and bureaucratic survival and advancement. For these reasons and regardless of merit, it is unrealistic to expect continuous city planning to be welcomed by all concerned.[26]

A deliberate strategy of acceptance and use is required. First, the core of information and analysis must be promoted and proven as a useful and relatively uncontroversial reference which serves the self-interest of many people in the municipal government. For example, municipal departmental managers can use the data to learn what other departments are doing which affects their operations or intentions. If it is municipal policy to locate facilities together whenever feasible, a police chief will want to know where the fire chief is planning new facilities in the future. Those concerned with land acquisition will want to know about the intentions of both departments, as will the mayor, city manager, councilmen, and others responsible for viewing the municipality as a whole.

For the activities of different departments to be coordinated, a core of information and analysis covering the current operations and future plans of each one must be available to the others and to those who must decide among competing demands for available funds. While this coordination is often resisted at first, it can be shown over time that duplication or conflict of effort can no longer be afforded, that mutual support is to everyone's advantage over time, and that coordination is mandatory in today's world of interdependencies between activities which could once upon a time operate more independently.

The strategic requirement for coordination is that each department or agency of local government present its functional budget, operating plans, and projections covering seven years in the future. If there are units which cannot or will not cooperate at first, the city planning staff develops this information for these units as best it can. The disadvantages to one's own self-interest of not cooperating are soon apparent.

Since the information, analysis, decision, and actions recorded in the planning center constitute the legal master city plan, it becomes a necessary reference for many people. Municipal departments, the mayor, the city manager, council members, the city attorney, and others use it to determine, support legally, or explain decisions and actions. Individual applicants for city planning approvals, special interests, citizens' groups, and litigants refer to it for the information each needs. Various private enterprises not directly involved in city planning find that following continuous city planning providess information concerning the operations and intentions of local government which enables them to improve the conduct of their own affairs. The main reason these continuing contacts have not developed in the past is that city planning is rarely up to date, more often after the fact than before the fact.

Another important use of the city planning center is to consider alternatives. When the time comes periodically to propose the allocation of available resources among competing demands, many different resolutions are possible. But the total array must always be mutually consistent and must meet aggregate limitations and requirements. This is difficult to do without the planning information, analysis, and flexible means of comparison incorporated in the planning center.

As an illustration, municipal departments can be encouraged to develop their own proposed solutions to matters about which they are deeply concerned but which involve other governmental units, activities, or considerations. With this kind of exercise possible in the planning center, the final resolution will be more explicable and probably more acceptable. Certainly a feeling of participation is encouraged. When alternatives have been studied by all directly concerned, the likelihood of irreconcilable disagreement is greatly reduced. Since the information shown in the city planning center indicates the parameters which workable plans must meet, citizen groups can prepare advocacy plans realistic enough for careful consideration.

Progressive involvement is the key tactic in getting continuous city planning accepted first by local government and next by the community generally. Item by item, information and analysis are made useful to the powers that be. Once this information and analysis are employed and a procedure for their regular use is established either formally or informally, it becomes progressively more difficult to abandon the now familiar process of consideration. From a small beginning of assisting municipal decision makers and others in their own self-interests, continuous city planning becomes an ingrained part of local government. Extrication becomes next to impossible, but change and improvement are not only possible but necessary, especially in industrial societies with advanced technologies.

Cost

The personnel required for continuous city planning need be no more numerous or higher paid than those now engaged in master planning. The number of people needed to maintain the analysis-display panels and take Polaroid or microfilm records will be more than offset by fewer people for typing, duplication, and drafting. However, those working in the planning center may have to adjust their habits from those acquired working on end-state master plans. Not only are there the differences in planning approach and philosophy discussed earlier, but continuous city planning requires alertness and quick response to relevant needs, decisions, and events.

With more realistic and meaningful planning, people from the chief administrator's office and from various municipal departments may work in the planning center from time to time on information and plans which they develop. To the extent that this reduces the work of the regular planning staff, operating costs are reduced.

Costs of information for continuous planning should be no more than for traditional master planning. While it may be possible to acquire and analyze more data which can be absorbed and used for decision making, the more efficient organization of these data should reduce costs correspondingly. If more than this additional information can be gainfully employed because of the greater effectiveness of the continuous city planning concept and center of analysis-display, it will naturally cost more for the superior product.

While there is every reason to keep the costs of planning and other staff activities as low as feasible, it must be recognized that planning is probably the most difficult of these to evaluate. It may be impossible to formulate a meaningful cost-benefit balance sheet. "In general . . . the higher the level of a corporate planning group, the less [the] likelihood that its activities can be measured in terms of specific savings."[27]

Edward Green has put it another way:

"It is relatively easy to identify and to make a rough evaluation of errors committed in the past that have been due in a large part to inadequate planning. It is difficult to get agreement as to how much of this loss could have been eliminated through planning, and it is particularly difficult to claim such savings on current or future operations. The problem is very much the same as though you were to ask for precise information regarding the savings that are effected through improved management. In the long run these savings will show up on the balance sheet, . . . but in the short run it is difficult to make precise allocation."[28]

And Dean Bowman has said:

". . . I do not believe that one can usefully come up with dollar earnings or dollar savings attributable to the Long-Range Planning function. This is because usually the function is a necessity to the conduct of a business which survives, and the real question is whether it is formally recognized as a separate and distinct function or one which is joined with other functions and does not get clearly demarcated."[29]

Of the many difficulties of evaluating planning, time lag and differentiation are most significant. Since many of the benefits of comprehensive planning do not manifest themselves for some time, today's record reflects planning analyses and decisions of the past. Usually, there is a time lag of years between major city planning decisions and the returns which permit an evaluation of their soundness. Since the fiscal period is one year and there is a strong tendency to let bygones be bygones and to concentrate on the present and future, the connection between past analysis and decision and the current situation and prospects is rarely established. When the logical and accounting difficulties of differentiating the consequences of specific planning decisions from the many other factors involved are added to the problems of historical backtracking, it is not surprising that a quantification of cause and effect is seldom feasible.

The best strategy of introducing continuous city planning makes cost-benefit analysis more difficult because it involves passing on to others as much as possible of the credit for accomplishment. Different municipal departments will more likely accept the concept of continuously coordinated operations and plans if they believe this is their decision and their doing. If credit for success is associated with them, natural resistance to a comprehensive planning staff mixing in is greatly reduced.

There is justification for this attitude if not carried to an extreme, for each department or municipal agency head is (or should be) responsible for the success or failure of his activity. When he is responsible for a "cost center," he is naturally protective of his prerogatives, because his advancement in civil service and in business is related to his record and image of achievement. Reluctant general managers can be induced to participate in continuous comprehensive planning or even be replaced. But this is neither desirable nor effective compared with gaining their cooperation by making it their show. The consequence of this for continuous city planning, however, is that its contributions cannot be claimed except through the good offices of others.

Whether the net return on an investment in planning justifies the cost is essentially a matter of judgment. Costs are easiest to determine because they are limited by accounting definition and tradition to what can be quantified in dollars. The salaries and overhead costs of staff personnel are readily calculated. The operating expenses of the city planning center can be established. Any reimbursable costs for specific studies or services performed for other municipal profit centers are taken into account. Budgets can be set and enforced.

To obtain total cost, the budget for continuous city planning can be added to expenditures for planning by different municipal units which are:

1. specifically responsive to a request by the comprehensive planning staff,
2. not a normal part of the efficient management of the units, or
3. over and above the planning expected throughout the municipal government.

Precise accounting of the time and money required for continuous city planning is difficult, impractical, and prohibitive in cost. The distinction between legislative decision making, general management, and comprehensive city planning is never simple and clear-cut.

In staff activities of a more general and administrative nature, costs are a source of greater concern than contributions. One reason for this, of course, is because cost control is important. To this end, personnel can indicate how much time they spend on different activities; expenses of the city planning center can be established; man-hours required for various comparable outputs can be compared. But such quantification can be neither complete nor conclusive.

Past expenditures and current commitments for comprehensive planning are hard fact, whereas benefits necessarily follow after costs. We accept the traditional accounting of administrative dollar costs; it is practical because it does not purport to be inclusive. Rarely, for example, is the executive time expended in a legislative, general management, or planning endeavor completely recorded. The value of time spent in one management-planning activity as compared with another cannot be quantified. Nor can the dollar cost to the municipality of using personnel in ways which do not fit their capabilities or interests be determined. Certainly, the costs in time lost through shortened careers and increased expenses of recruitment and training are not calculated. There are no standard· costs for managerial ulcers to professional discontent.

Meaningful measurements are hard to find for particular methods or procedures of executive management relating to such crucial performance capabilities as coordination, efficient communication, morale, municipal reputation, or the numerous longer-range policies and decisions which cannot be proved out for years—and which in some instances cannot be specifically validated at all.

In considering the costs and benefits of continuous city planning, expenditures are usually accepted at face value because they are real numbers, but benefits are challenged unreasonably because they are forecast, estimated, and largely subjective. Actually, both sides of the cost-benefit accounting are inconclusive. Both involve the critical element of general judgment. The appraisal of benefits is less tangible and more difficult in degree rather than kind. In justifying continuous city planning, a burden of numerical proof which is unrealistic or impossible defeats its purpose. If benefits could be calculated as closely as costs, comprehensive city planning would not be conducted at the topmost level of government. For it is top management in business and the lawmakers and top officials in government who must cope with intangibles and uncertain projections. Managing and planning a business enterprise or municipality are inherently and inevitably less precise than directing some specific part. For better or worse, therefore, informed judgment of the value of comprehensive planning transcends as well as reflects and manipulates quantitative data.

City Planning Center

Construction costs for a permanent city planning center must be approximated because much depends on the building and space within which it is created. A combination carpenter, cabinetmaker, and craftsman with the requisite skills and experience could build most of the installation, with the help of an assistant. An electrician would be needed for the overhead lighting and other electrical installation, and an air-conditioning technician to connect this space within the system serving the entire building.

The estimate given immediately below is approximately four times the cost of a similar installation much smaller in size and less complete, built in 1957.[30] One-half of the greater cost is attributed to the larger size of this illustrative installation, the other half to higher construction costs.

Construction:	
Rooms (platform, swing-out walls, lighting, projection; auditorium seats and furniture not included)	$25,000
Wall Recesses (slide channels, rollers, storage, other)	5,000
Analysis-Display Boards (honeycomb, menu-board, magnetic, transparent, other)	2,500
	$32,500
Display:	
Aerial Photographic Picturization[a]	8,000
Analysis-Display Materials[b]	3,500
Projector, Screen, VueGraph, Computer Terminal[c]	2,500
	$14,000

[a] Based on cost data in *City Planning and Aerial Information* (Harvard, 1971), pp. 54-61.

[b] Includes various kinds of flexible display surfaces, such as menu-boards and several magnetic boards, a supply of stick-on tapes and letters, overlay devices, and other materials with which to display information.

[c] If it should prove desirable and feasible to incorporate a computer terminal in the city planning center, it should be possible to obtain the experimental cooperation of a company producing computer hardware or software.

Means of Evaluation

There are only a few ways of evaluating the benefits of continuous city planning. The first is so unsophisticated that it is rarely recognized for its true worth. A record or log can be kept by the planning director or the chairman of the commission of specific instances when, in their opinion, comprehensive planning benefited the municipality in some definite way. However approximate, an estimate of the value of the analysis or recommendation can be made. Even a conservative estimate is usually more than the cost of the staff activity.

At the time of the notation, the instances are clear enough to everyone concerned; but with the passage of time memory is blurred and many happenings are not remembered specifically when an evaluation is undertaken or hard times intensify cost cutting. If, however, events and their estimated benefits are noted in a file or logbook as they occur, with the date, relevant facts, and supporting explanation, they constitute a meaningful record.

Although this evidence is judgmental and circumstantial, most of the situations reported are not only familiar to the legislative body and municipal officials who approve the budget for continuous city planning, but they are so like their own areas of managerial concern that the reported contributions are meaningful to them despite the absence of precise quantification. Normally, there is no need for the comprehensive planning staff to claim credit publicly or within the local government. It should suffice that those who are directly responsible for reviewing its activities know what the comprehensive planning staff maintains that it has achieved.

Another instrument of appraisal is an ad hoc committee of from three to five persons who are competent and respected. They should be sufficiently experienced to be able to judge performance, with knowledge of planning generally and city planning specifically and without vested or conflicting interest. They must be able to spend enough time to review operations in some detail. To this end, they should be paid reasonable compensation and their expenses reimbursed.

They report their collective or separate opinions with a clear explanation of the facts and reasoning behind each judgment, within a framework of premise, inference, deduction, and conclusion. This evaluation is subjective, too. Its merits lie in plural manpower, the probability that several well-chosen heads are better than one. Also, there is no direct involvement, which should make it easier for committee members to be as objective as possible. Additionally, their findings should always be useful to the director of the continuous city planning activity.

Insofar as he can, the responsible director also evaluates his own management and operations. Although such self-criticism is very difficult, the director can be constructively objective, particularly if he believes that realistic self-appraisal is in his own self-interest because it improves his performance.

The best evaluation of continuous city planning would be all three of these means. With a log of claimed attainments, the observations and conclusions of an independent committee, and the director's self-evaluation of his own and his staff's performance, there is a substantial basis for appraisal.[31]

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ARTICLE 3. LOCAL LAND DEVELOPMENT PLANNING

COMMENTARY ON ARTICLE 3*

This Article deals with those activities of the local urban planner that relate to the development of land (the location of activities that use land, the physical structures which are maintained on land, and the conservation of land and of natural resources). It requires the planner to take economic and social data into consideration and to estimate social and economic consequences of proposals for development. But it deals with social and economic planning only insofar as they relate to physical planning for land development.

It also assumes that the planner is working for a general purpose local government—from a large metropolitan city to a rural township—but that there may exist a regional or state planning agency with some powers of intervention.

The Article instructs the planner to take certain steps centered on the development of land.

He is to develop a Local Land Development Plan which includes information concerning present problems and conditions, (§ 3-103), future probabilities if present trends continue, and statements of objectives, policies and standards to solve the stated problems and to set forth desired patterns of development. (Section 3-104). The Plan must also include a specific "short term" program of public action to move in the direction of the long term goals. (Section 3-105).

The Local Land Development Plan must be sent to governments and agencies which have filed requests. After their comments have been considered the Plan may be adopted by the local governing body. (Section 3-106). Thereafter, the planner submits to the local governing body periodic reports which may recommend revisions of the Plan and which must contain a new short term program for realizing the old and the newly reformulated objectives. (Section 3-107).

Two key issues need to be resolved in regard to the content of the plan: First, to what extent should the plan concentrate on physical development? Second, should the plan emphasize long term goals or continuing processes?

1. *The Role of Physical Planning.*

Traditional urban planning based on the SPEA has concentrated on (a) the proper location and intensity of activities which use land, and (b) the type, design, and location of physical structures and facilities that serve these activities. The planner has examined the present physical setting, made long range projections of population and employment, and forecasted land and facility demands to be generated. Then, applying professional judgments as to desired future conditions, he has prepared a plan locating activities and specified facilities.

This planning process has a number of objectives. (See, *e.g.*, Mocine, *Urban Physical Planning and the "New Planning,"* 32 J.A.I.P. 234 (July 1966).) One is to maximize economic efficiency by predicting physical facility needs and coordinating the size and location of such facilities with activity locations. Thus, for example, the process should lead to acquiring land and building schools near planned residential locations, constructing sewer lines large enough to serve adjacent activities, and locating expressways to

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* This Article and the Commentary and Notes thereon are primarily based on the work of Professor Ira Michael Heyman which appeared in Tentative Draft No. 1 of the Model Land Development Code.

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Article 3

connect places of residence and employment. This objective recognizes the long lead time required for major public improvements and the desirability of employing these improvements efficiently over their life times to justify the original expense.

A second objective is to maximize desired relationships between different land use activities and their attendant physical structures. For example, a plan may call for areas exclusively developed for single family residences, but with provision for nearby shopping centers. Or it may seek to stimulate mixed residential densities and certain commercial activities. This objective assumes that the market is deficient in creating desired mixes of uses. It also assumes that without governmental intervention individual landowners will create external costs, and environments of maximum desirability will be largely unobtainable.

A third objective is to allocate land (a scarce resource in a locational sense) to desired activities. For instance, the city may decide that it wants to encourage only single family houses, but the market unhindered would result in numerous multiple dwellings. Or, the city may desire to encourage industrial investment and seek to preserve adequate space for new factories. This objective, like the second, assumes an imperfect market and the necessity of governmental intervention to stimulate private investment towards desired goals.

A fourth objective is to provide a general urban design which is pleasing. For instance, a plan might call for the preservation of open space for recreation and appearance, require tree planting and setbacks, attempt to order the three-dimensional design of areas, or group leisure activities in specified locations.

A growing number of planners reject this traditional

approach. They argue that planning for physical development is based on insufficient information, has too limited a focus, and is unrelated to desirable economic and social goals. In addition, as explored below, they believe that long-range (end-state) planning is not effective; rather the planner should concentrate his efforts on short term programs to realize specific objectives.

William Wheaton, Director of the Institute of Urban and Regional Development at Berkeley, analyzed the metropolitan plans for Denver and Washington and concluded that the patterns of physical development stated were based on five biases of planners, probably not shared by the community at large. The biases were (1) that scattered development is inherently evil; (2) that open space should be preserved; (3) that a city should have a strong, high density core; (4) that the journey to work should be reduced; and (5) that central urban residential locations are preferable to suburbs of single-family homes. Wheaton asks whether objectives like full employment and maximization of opportunities for under-privileged groups are not more important. He admits the present difficulty of designing plans for these objectives, but he argues that physical plans must at least attempt to forecast economic and social consequences which will flow from the stated development pattern. (Wheaton, *Operations Research for Metropolitan Planning,* 29 J.A.I.P. 250 (1963).)

Melvin Webber, a colleague of Wheaton's, goes further. He suggests that viewing cities as physical structures, rather than societal systems, is harmfully simplistic and leads to plans that

> yield no assurances that the investment payoffs would best serve the objectives being sought, that the [implicit] allocations of benefit and cost are most equitable, or that the timing of construction is optimal to the intended goal. Moreover, [in his

> view], it is highly doubtful that this planning approach facilitates adaptation to rapidly changing external conditions, that it is also suited to planning community *service* programs, or that it is relevant to the millions of market-oriented decisions and actions that are taken by agencies outside the direct authority system of the municipal corporation.

Webber alludes to present research that is seeking to uncover meaningful ways to describe and analyze how urban systems function, but finds no present solution in planning theory. He prefers an interim system of information gathering and short term programming to solve pressing municipal problems until there is a mature planning theory. He believes that theory will evolve as data become available by use of computer techniques. (Webber, *The Roles of Intelligence Systems in Urban-Systems Planning*, 31 J.A.I.P. 289 (Nov. 1965).)

The Code can take any of four major positions: (1) A plan should deal only with physical development without consideration of economic and social data and consequences. (This basically is the approach of the SPEA.) (2) The plan should have a physical development nucleus but should require that specified economic and social data be taken into consideration in its preparation and consideration. (This is the approach adopted.) (3) The plan should have a development focus and speak primarily in terms of economic and social objectives and means for their attainment including physical development. (This path is largely uncharted.) (4) There should be no section on planning because there is no solid urban planning theory at present.

Alternative (2) has been chosen for several reasons. First, the Model Land Development Code encompasses a variety of laws relating to the physical development of land but does not attempt direct regulation of social and economic affairs outside the sphere of land development. It is appropriate, therefore, that the planning powers authorized by the Code be limited to those that parallel its other Articles. Second, we have existing institutions of land planning which need a framework. The present statutory framework, built on the SPEA, is inadequate in a number of respects. We are beginning to appreciate better than before that we cannot realistically determine patterns and characteristics of physical development mainly on the basis of design and appearance. Rather, how and where development takes place relates more importantly to social and economic values and objectives. Therefore, we should require explicit analysis and disclosure to the greatest extent possible of a variety of social and economic consequences of planned physical development. Otherwise we hide such policy judgments, make them implicitly rather than explicitly, or, as often occurs, design a plan which will never be carried out because the implementing decisions will be politically unfeasible.

It should also be emphasized that the Reporters are not trying to foreclose the undertaking of other types of social and economic planning by government agencies. The Land Development Plan authorized by this Article is the type of plan needed to provide an enlightened basis for land development decisions, but the local planning agency may also engage in planning for health services, welfare reform, or many other subjects not directly related to land development. Authority for such planning is frequently found in various state and federal statutes designed to promote better planning for transportation facilities, relocation, hospitals, social services or a wide variety of other purposes.

It is highly desirable to meld as many of these planning processes together in as comprehensive a fashion as possible. This is not, however, a comprehensible planning code, it is a land development code. The planning process authorized in this Article 3 is designed primarily to oversee the land development process. To use this Code as a vehicle for defining the criteria for other types of planning would do such planning a disservice since the preparation of this Code has involved no study of, e.g., the coordination of educational programs or social services.

In sum, therefore, the Reporters believe that the planning process required by Article 3 is of sufficient scope to deal with the major issues of land development. Integration of land development planning into a more comprehensive planning process is desirable and important but is beyond the scope of this Code.

2. *The Continuing Planning Process*

Most master plans have been of the long-range (end-state) type. They have sought to present a ''picture'' of what the planning area should look like some twenty or twenty-five years in the future. In the view of many planners, however, few of these plans have had a demonstrable impact on development. (See, *e.g.*, Meyerson, *Building the Middle-Range Bridge for Comprehensive Planning,* 22 J.A.I.P. 58 (1956); Webber, *Prospects for Policies Planning,* in Duhl (ed.) *The Urban Condition* (1963), 319; Robinson, *Beyond the Middle-Range Planning Bridge,* 31 J.A.I.P. 304 (Nov. 1965); Mitchell, *The New Frontier in Metropolitan Planning,* 27 J.A.I.P. 169 (Aug. 1961).)

The ineffectiveness of master plans of the traditional type is due probably to a number of factors. First, it is extraordinarily difficult to foresee changes in technology, economic conditions, and the like, over a long period of time. Second, master plans have generally failed to take explicit account of the social and economic impact of the stated physical design. When the time comes to effectuate the design by undertaking specific development or regulatory programs the effort fails because the now perceived impact make the programs politically unrealistic. Third, the plans do not undertake to address the most difficult problem—how the objectives are to be achieved. This deficiency often makes the objective stating process unrealistic—simply utopian goal setting. Moreover, planning as a child of architecture, has seemed ''to be for a static city to be built all at once and to be preserved indefinitely without change.'' (Mitchell, *op. cit.* at 170.)

Fourth, the planning process is said to proceed from the general to the particular. (See Chapin, *Urban Land Use Planning* (1965 ed.) 349-354). In Chapin's view the initial statement of objectives should be at a high order of generality. He quotes with approval the following list taken from a study of regional growth alternatives in the Hartford, Connecticut area:

1. Provide for the orderly growth and development of the region while preserving a measure of diversity among its parts.
2. Allocate land in the region, recognizing that it may become a scarce resource, to be conserved rather than wasted.
3. Satisfy the multiple needs of a society with increasing amounts of leisure time in general, and preserve the amenities associated with the region's ''open character'' in particular.
4. Maximize the opportunity for a wide range of choice in residential living arrangements in general, and serve the varying housing needs of the region's population in particular.
5. Help promote sound economic development and assure employment stability of both the region and the state.
6. Minimize conflicts with residential areas and facilitate the provision of required public services, particularly transportation and utilities.

Thereafter, the planning process should deduce from these general principles lower level objectives and policies.

A difficulty with the approach is that it is nearly impossible to state significant general objectives in the first instance. For example, what does the first of the quoted objectives mean? Specifically what is meant by "orderly" and by "diversity"? Does "orderly" mean development proceeding from present population centers outward rather than "leapfrogging"? Or does it mean starting new population centers in presently undeveloped areas with greenbelts separating the population cores? And what happens if sporadic building is the only practical way to obtain "diversity"? Moreover, even if the objectives were more certainly stated (perhaps number 6 is an example), how can choices rationally be made without knowing their implications?

A major problem with this type of planning is that key decisions are made through a deductive process which reasons from plausible sounding but uncertain statements based on professional standards and predilections whose origins or rationale are only rarely made explicit. (See Webber, 31 J.A.I.P. at 291.) Thus, if the plan is effective, there is no assurance that the choices are those which actually would be desired by a majority of the population, or their representatives, if the implications and rationale were known.

Fifth, there is a growing dissatisfaction with the classic formulation of the planning and decision making process. Banfield summarized the process as follows (Meyerson & Banfield, *Politics, Planning and the Public Interest* (1955) 314):

> 1. the decision-maker considers all of the alternatives (course of action) open to him; *i.e.*, he considers what courses of action are possible within the conditions of the situation and in the light of the ends he seeks to attain; 2. he identifies and evaluates all of the consequences which would follow from the adoption of each alternative; *i.e.*, he predicts how the total situation would be changed by each course of action he might adopt; and 3. he selects that alternative the probable consequence of which would be preferable in terms of his most valued ends.

Banfield recognized the impossibility of identifying all alternative courses of action and possible consequences but suggested that the model represented an ideal towards which the planner should strive. Meyerson (22 J.A.I.P. 58 (1956)) suggested an operational framework of continuous market analysis and middle range action programs with testing of consequences. The Community Renewal Program (CRP) largely adopted the Meyerson approach. There is doubt that even this process is realistic. (See Webber, 31 J.A.I.P. 293 (1965).) It is difficult for a legislature (or an executive) to make coordinated decisions from a "central command post" in view of the multitudes of separate interest groups participating separately in decisions that affect their central interests. Even more fundamental is the question of whether government decision-making can be comprehensive in operation. Lindblom at Yale argues that governments can only hope to take small, marginal actions to relieve undesired conditions as they arise.

A number of planners, influenced by operations research and systems analysis, believe that planners should center their attention on short-term programming to solve presently perceived problems. Even they recognize, however, that decisions must be made for the construction of public improvements which will be long lasting and will influence development significantly. This alone requires some long-term planning. In view of the deficiencies of traditional master planning the planning process should recognize that "goals are not fixed but are directions towards which, at any point in time public activity should be directed." (Webber, in the *Urban Condition.*)

This Article provides for long-term goal setting. The goals, however, are to be put in terms of nature and rate of change rather than in static form. Further, the goals are primarily important as a framework for the short-term programming required by Section 3-105 and they are expected to change. In addition, the Code makes numerous references to the identification and treatment of major problems of physical development. These are the basic departure points for the programming. Thus the Article provides for a broad framework of objectives, but is concerned mainly with the preparation and evaluation of specific programs of public action.

It is important to compare this planning process with planning theories currently being discussed within the planning field. Richard Bolan in a recent article (*Emerging Views of Planning*, 33 J.A.I.P. 233 (July 1967)) canvasses alternative strategies and methods of planning currently being espoused.

Strategies comprise "the means by which the planner attempts to persuade government officials and others that governmental policies and plans ought to be influenced by the information, criteria, and values which he (the planner) is specifically able to bring to bear." (Bolan, *op. cit.* at 237.) The question is what role should the planner play in governing. Bolan lists a number of possibilities.

(1) The planner might be seen as the builder of sophisticated information systems which better inform private and public decision-makers of the social and economic consequences of alternative development decisions. The planner's primary role is thus as steward of a technical agency which gathers and correlates data and publishes information and analyses for the use of those making the myriad decisions which result in the pattern of continuing development. As the information and analytic systems became more sophisticated, the planner could work out alternative patterns of public interventions which would maximize opportunities and minimize conflicts. These would be integrated into the political process in ways yet unspecified.

(2) The planner's role might be substantially identical to that of elected officials. He would use his methodological skills and "objective criteria" directly in settling issues between disputing interest groups. He would thus be the alter ego for a mayor in a strong executive form of government or like a city manager in the council-manager form.

(3) The planner might be seen more as an advocate translating into planning terms the values and self-interests of groups within the society. There would be planners on the executive's staff, planners advising the legislature, and planners representing private interest groups including the various sectors of the urban poor.

(4) Planners might function in a staff agency which seeks to identify and deal with present crises or those soon to occur. The emphasis would be on problem-solving rather than on goal setting. The planner's job would be to produce strategies to deal with immediate issues (*e.g.*, the next "hot summer") rather than long run sets of objectives (*e.g.*, integrated living patterns and employment upgrading).

This Article incorporates features of a number of the approaches outlined by Bolan. First, the Article does not jettison long-term goal setting, but encourages the assembly of a wide variety of information, the making of trend predictions, and the statement of long-run objectives. The planners are asked to estimate probable economic and social consequences of both governmental inaction and governmental intervention to realize the objectives which are stated. These efforts, however, are mainly to provide a framework for a systematized program of government action over a relatively short period of time after which the framework is expected to be readjusted.

Second, the Article, by emphasizing the short term program of intervention and requiring identification of and focus on problems, recognizes the limitations of comprehensive planning. It invites the use of new techniques such as program planning in the fashioning of the short term program and it explicitly requires evaluation of the success of such programs.

Third, the Article requires both considerable disclosure and adoption by the local legislature. This is designed to give all interest groups access to important information relating to economic and social policy, to stimulate adversary processes in the fashioning of plans, and to require political resolution of disputes.

Bolan stresses that a planner's role and method depends in large part, if planning is to have an impact, on the political structure of the government in which the planner is operating. The Reporters agree and the Article purposely leaves to local option the placement of the planning function. In a council-city manager form a planning commission might be ideal and the planner's role might well be highly technical. In a strong mayor form the planner might ideally be a deputy mayor in charge of a staff agency whose primary role is political. The Article permits these choices. On the other hand, the Article sets forth a general decision-making process which highlights the creation and consideration of a fairly concrete, well-considered, pattern of public activities to be undertaken over a relatively short period of time.

3. *Outline of the Article*

It is possible to summarize the mandatory elements of Article 3 that apply to a Local Land Development Plan as follows:

(a) The Plan must be based on studies of all the factors listed in § 3-103 that are relevant to the community.

(b) The Plan must project future trends based on these studies. (§ 3-104(1))

(c) The Plan must contain objectives, policies and standards of a nature that will enable the local government to exercise such powers dependent on a Land Development Plan as it may wish to exercise in the future (§ 3-101(2)).

(d) The Plan must be prepared to withstand a test in Court in regard to its reasonableness or its appropriateness and completeness in relation to any particular governmental action which may later be taken (§ 3-101(3)).

(e) The Plan must contain a short-term program of public actions to be taken within a period of one to five years in order to achieve objectives, policies and standards stated in the Plan, and must contain an indication of types of future programs to be undertaken after that period (§ 3-101(1) and § 3-105(1)).

In addition it is mandatory that the Land Development Plan be adopted by the methods set forth in § 3-106. A local government that wishes to retain all of the powers granted to planning governments will also be required to adopt Land Development Reports at regular intervals under

§ 3-107 in order that its Land Development Plan may be kept current. (§ 3-107(6)).

The remainder of Part 1 of Article 3 sets out guidelines for the preparation of Land Development Plans but does not insist that each Plan contain all of the material specified in the guidelines. The diversity of local conditions that will exist between different communities in a state makes it desirable that a substantial amount of discretion be granted to local communities in determining the content of a Land Development Plan that is appropriate for their own local conditions.

ARTICLE 3. LOCAL LAND DEVELOPMENT PLANNING

Part 1

Local Land Development Plans

Section 3-101. Local Land Development Plan

(1) Using the procedures of § 3-106 a local government may adopt a Local Land Development Plan which shall be a statement (in words, maps, illustrations or other media of communication) setting forth its objectives, policies and standards to guide public and private development of land within its planning jurisdiction and including a short-term program of public actions as defined in § 3-105.

(2) Whenever any power exercised under this Code is required to bear some relationship to a Local Land Development Plan, a "Local Land Development Plan" means a statement adopted under § 3-106 appropriate for the objective, policy, or standard which the local government indicates will be achieved by the particular governmental action involved.

(3) Sections 3-102 through 3-104 are only guidelines concerning the purposes and contents of Local Land Development Plans and a Local Land Development Plan may not be reviewed by any court as to compliance with this Code on the ground that the contents or purposes are not consistent with this Code. Nothing in this subsection is intended to prevent a court in its consideration of any governmental action concerning development from considering the reasonableness of the Plan or its appropriateness and completeness in relation to the governmental action under consideration.

(4) A local government may designate any agency, committee, commission, department, or person to prepare the Local Land Development Plan.

NOTE

1. Subsection (1) defines the Local Land Development Plan as a statement of objectives and programs to guide the development of land. The statement can be made by whatever means are found appropriate at the local level. This Section rejects a position sometimes held that objectives should be stated solely in words, and adopts the view that maps and diagrams may be the best media of communication in some circumstances, especially in the statement of short-term programs.

The objectives and programs contained in the plan are "to guide . . . development of land." The reasons for this choice are explained in the commentary. Nevertheless, social and economic consequences of physical development are to be explored.

2. This Section authorizes but does not require, every local government to adopt a land development plan. This is consistent with the prevailing law of most states, but in recent years a few states have imposed mandatory planning requirements. California now requires all local governments to adopt comprehensive plans. (Cal. Gov § 65101, § 65013.2). In 1973 Oregon passed a law requiring all counties to adopt comprehensive plans (S.B. 100, 1973 Session). In Washington, under RCW 36.70.010 counties are required to adopt comprehensive plans.

It has been argued that our increasing awareness of the complex interrelationship of the environmental, social and economic factors in the land development process make it essential that land be treated as an important resource requiring a type of long range protection that regulation based on maximization of immediate economic value may not achieve. "In the long run land values will reflect our ability to maintain a society in which people will want to own land." Fred Bosselman and David Callies, *The Quiet Revolution in Land Use Control,* 318 (1971).

Protection of land's resource value may be important even in areas where the current residents are not conscious of any problems of sufficient gravity to warrant the inconvenience of imposing land use regulations. Second home subdivisions in sparsely populated areas may, if not properly undertaken, seriously and permanently diminish the resource value of large land areas. See Citizens' Advisory Committee on Environmental Quality, *The Use of Land* 263-93 (1973).

It can be argued that a proper concern for the resource value of land requires that *all* land be subject to plans based on an evaluation of the risks associated with various uses of the land. This might well suggest that all local governments should be required to adopt land development plans under Article 3.

This Code, however, takes a different approach. Article 8 authorizes the state government to undertake a land development planning process for the state as a whole or for any region thereof. Article 7 authorizes specific methods by which the State Land Planning Agency can regulate areas of the state and categories of development that present potential problems. Having this power available the state need not try to coerce cooperation from unwilling local governments since it can exercise the necessary power directly.

3. The Code does try to encourage the adoption of local plans by granting certain powers to local governments on condition that a Land Development Plan be adopted. When such a power is exercised, subsection (2) provides that the local government must indicate which objectives, policies or standards in the Land Development Plan will be achieved by the particular action it is taking. This requires the local government, when taking any action that is by law required to be consistent with a Land Development Plan, to consider and demonstrate such consistency at the time the action is taken.

By granting these additional powers to local governments that adopt plans the Code intends to create an incentive for local governments to engage in the planning process. The powers that are conditioned on adoption of a plan are:

(1) a local government may adopt special procedures for regulating planned unit developments (§ 2-210);

(2) a local government may authorize a Land Development Agency to designate "specially planned areas" and prepare "precise plans" for development within these areas (§ 2-211);

(3) a local government may include criteria for development permission in its Land Development Plan and then incorporate such criteria by reference into its development ordinance (§ 2-212);

(4) a local government that has a Land Development Plan may adopt special preservation districts while a nonplanning government must first prepare a written report analyzing considerations listed in § 2-209(1)(b);

(5) local governments with plans may reserve land for future acquisition by public agencies (§ 3-201); and

(6) local governments have broader powers to discontinue existing land uses (§ 4-102(1)).

It has been argued that if the community leaders seek maximum flexibility to deal with each new development proposal on an ad hoc basis then no incentives will be of sufficient value to outweigh the constraints imposed by a plan on spontaneity of decision making. David Heeter and Frank Bangs, *Local Planning and Development Control: One Bad Apple Spoils the Barrel,* 1971 Land Use Controls Annual 27, 37-8 (1971). However, the restrictions on special amendments (§ 2-312) and other techniques of case-by-case regulation in Article 2 make these incentives of real value to a community that wishes to obtain a flexible system of controls.

4. Subsection (3) sets out the limits of judicial review of Land Development Plans. The courts are told that the purposes of preparing a Land Development Plan (§ 3-102), the Plan's description of present conditions and problems and the studies and surveys on which the Plan is based (§ 3-103), and the objectives, policies and standards contained in the Plan (§ 3-104) are not subject to judicial review regarding their consistency with the guidelines set forth in this Code. The court is, however, not foreclosed from considering the reasonableness or appropriateness of any Land Development Plan in regard to the facts of any specific case.

5. Subsection (4) does not specify any one agency to prepare the Plan. This is a departure from the SPEA which devoted over one-half of its sections to the procedure for plan preparation and to the establishment of one particular agency to prepare the Plan. The SPEA chose a citizens' planning commission as the agency responsible for plan preparation and to this end it provided that six of the nine members of the commission should be "outstanding" civic leaders appointed for six-year overlapping terms.

In recent years the independent planning commission has come under increasingly strong criticism.

> "It is my view that the plan commission, except, perhaps, in the smallest communities, is a dodo. It is, as a growing body of criticism suggests, neither expert nor responsible. It undoubtedly did make sense in the early days of municipal planning when well-trained professionals were scarce and pressures on land use were light, but today it is the principal deterrent to more meaningful communication between the professional planner and the politically responsible decision-maker. . . .
>
> "The professional, in planning or politics, has our respect, if not always our sympathy. We know what his benchmarks are likely to be. We understand the risks he must constantly weigh, the alternatives he must balance. He may disagree with us and defeat us, but generally we know why we were rejected. The same cannot be said of the inscrutable commissioners in their role as decision-makers." (Richard Babcock, The Zoning Game 40 (1966).

Paul Davidoff has gone even further, arguing that the independent planning commission is "aristocratic and undemocratic," a product of a "conservative reform movement" of the early 1900's that "was essentially anti-populist and pro-aristocracy."

> "The commissions are relics of a not-too-distant past when it was believed that if men of good will discussed a problem thoroughly, certainly the right solution would be forthcoming. We know today, and perhaps it was always known, that there are no right solutions. Proper policy is that which the decision-making unit declares to be proper." (Paul Davidoff, *Advocacy and Pluralism in Planning* 31 J.A.I.P. 331, 335 (Nov. 1965))

In some jurisdictions there has been a movement away from the use of the traditional planning commission and toward the creation of a planning agency in the executive department, particularly for larger cities. See Jerome Kaufman, *Changes Sweep Local Planning Commissions* 31 Public Management 221 (Aug., 1966).

Two recent surveys of planning directors of cities around the country reveal, however, that at the operating level the attitudes toward the planning commission are not as wholly negative as readers of the literature might have concluded. A survey by the American Society of Planning Officials of one-sixth of the planning directors in the country found little support for abolition of independent planning commissions.

> "Very few respondents contemplated abolishing the planning commission. Almost all believed that, whatever its defects, the commission served a number of important functions." (ASPO Planning Advisory Service No. 200, p. 12, July, 1965).

Francine Rabinovitz and Stanley Pottinger reached similar conclusions after a survey of 200 directors of planning agencies:

> "It appears that while the independent commission may be especially useful in some circumstances, it is undesirable in others. The more recent trend toward the placement of planning agencies in the office of the chief executive is no more suitable to all cities than its predecessor. It seems that there is no single kind of planning organization which can best meet the needs of every city. It was found that organizations responsible for effective planning seem to vary greatly with differing local circumstances." (*Organization for Local Planning: The Attitudes of Directors,* 33 J.A.I.P. 27-28 (Jan. 1967)

Of course planning directors may have merely concluded that planning commissions are so deeply imbedded in state law and tradition that to protest against them would be futile and dangerous. But the Reporters have concluded that, despite the force of the increasing criticism of the independent planning commission, at this point in time no clear-cut conclusion emerges as to the ''best'' method of organizing for preparation of the Plan.

It would appear to the Reporters, therefore, that the Code should leave the problem of organizational structure to the local governing body which has the greatest familiarity with local circumstances. As a result the Code, unlike the SPEA, would not require an independent planning commission, but neither would it forbid such a commission.

Cross-References: §§ 2-212(n); 3-102(n).

Section 3-102. Purposes of Preparing a Local Land Development Plan.

The purposes of preparing a Local Land Development Plan are:

(1) to initiate comprehensive studies of factors relevant to development;

(2) to recognize and state major problems and opportunities concerning development and the environmental, social and economic effects of development;

(3) to set forth the desired sequence, patterns, and characteristics of future development and its probable environmental, economic and social consequences;

(4) to provide a statement of programs to obtain the desired sequence, patterns, and characteristics of development; and

(5) to determine the probable environmental, economic and social consequences of the desired development and the proposed programs.

NOTE

This Section deliberately begins with the words ''purpose of preparing'' rather than ''purposes of a plan.'' This is to stress the importance of the continuing planning process and to subordinate the importance of the ''final'' product. That product, the Local Land Development Plan, should always be seen as a transitional device, especially as to its long-term objectives.

The stated purposes summarize the sections to come. All are related to development, emphasizing the basic physical orientation of the Local Land Development Plan.

Section 3-101 enables a local government to ''adopt'' a statement setting forth its objectives, policies and standards ''to guide'' public and private development of land. Sections 3-103 and 3-105 are directives to the agency charged by the local legislative body with planning responsibility. Section 3-102 is related to the Sections which follow by stating the purpose of *preparing* a plan. This is in contrast with the Standard Planning Enabling Act and much existing enabling legislation which speaks of the purposes of ''the plan'' or end-product of a planning process.

The purposes stated in this Section are purposes of creating a capability in a local government of being able to compare the immediate past with the present in order to recognize indicators of change in the territory of the government. These indicators may or may not indicate the existence or the expectation of a problem. The stated purposes are also the creation of a capability of proposing and encouraging development which will help meet the problems foreseen or which will retard the occurrence of undesirable change. Furthermore the stated purposes of the planning process is to enable a local government to make rational predictions of the consequences of development programs. The purposes stated in this Section summarize the later Sections in Part 1 of Article 3.

The introductory comment to Article 3 indicates the existence of a controversy among professional planners, between those who emphasize physical development and those who emphasize the social and economic objectives of government intervention. The types of governmental intervention authorized in Articles 3, 5, 12 and other Articles of this Code are types of intervention which directly or indirectly affect physical development—*controlling* the decisions of private and governmental owners as to how, where and when physical development is to take place; acquiring and disposing of land; and granting financial aid for desired physical development. Thus it would be expected that the planning process of local government authorized by this Code would be a process concerned with social and economic matters which could be affected by these types of governmental intervention. Sometimes the planning process will be concerned with physical development which directly promotes some social goal—e.g., a public recreational facility which the governing body determines the community needs or wants. On the other hand the planning process may be concerned with physical development recommended to counteract social and economic factors over which the local government has no direct control—e.g., a public improvement program to offset a major change in the employment base of the community caused by a technological change in the national or international economy.

By this Code a local government is empowered to mold the use of land within its borders. It may and no doubt will base its actions on social and economic objectives. As this Section indicates, one of the purposes of preparing a land development plan is to enable the government to be aware of the consequences of any further public intervention into land development, of the existence of alternative forms of governmental intervention, and to enable the local government to consider the recommendations, in the circumstances, of the preferred pattern of intervention. The planning authorized by Part 1 of Article 3 is commensurate with the governmental interventions authorized in the balance of the Code.

It may be desirable for some local governments at least to have a board of economic or environmental advisors similar to that found in the executive branch of the federal government. The fact that this Code limits its recommended planning process to that involved in formulating interventions concerning land development does not prevent the creation of such agencies.
Cross-References: §§ 3-101; 3-101(n).

Section 3-103. Planning Studies

(1) A Local Land Development Plan shall be based on all of the following studies unless the Plan specifies that particular studies are unneeded in the community and states the reasons therefor;

(a) population and population distribution, which may include analyses by age, educational level, income, employment, race, or other appropriate characteristics;

(b) amount, type, intensity, and general location of commerce and industry;

(c) amount, type, quality, and general location of housing;

(d) general location and extent of existing or currently planned major transportation, utility, and community facilities;

(e) amount, general location, and interrelationship of different categories of land use;

(f) extent and general location of blighted or deteriorated areas and factors related thereto;

(g) areas, sites, or structures of historical, archeological, architectural, or scenic significance;

(h) natural resources, including air, water, open spaces, forests, soils, rivers and other waters, shorelines, fisheries, wildlife, and minerals;

(i) present and prospective availability of financial resources needed to undertake development proposed in the plan; and

(j) any other matter found to be important to future development.

(2) The studies shall comply with any data requirements established by the State Land Planning Agency under § 8-503.

NOTE

This Section authorizes the inclusion in the Local Land Development Plan of various categories of information and authorizes the undertaking of the studies necessary to obtain this information. The information is to be "problem oriented" in that the preparers of the plan are asked to identify conditions which they perceive as faulty and inadequate. This is an attempt to create a problem-solving bias—a process that moves away from deficiencies as well as towards ideal conditions.

Subsection (1)(a) authorizes analysis of population by characteristics as well as by numbers. This is obviously controversial, especially with respect to race. The provision is included, however, because such characteristics are relevant to the demand for services which use land and to the consideration of policies to affect future decisions. Racial integration, for instance, is an issue of controversy. A host of governmental programs are devoted to the goal of integration. It is highly unrealistic to bury this issue in the local plan. Decisions respecting development have measurable impacts on the distribution of racial groups. Explicit consideration of these impacts requires information on present distributions.

Subsections (1)(b)-(d) authorize an inventory of the chief types of physical development—those related to commerce, industry, housing, transportation, utilities, and community facilities. Subsections (1)(e), (f), (g) and (h) authorize a listing of the general locations of areas used or suitable for different purposes and a commentary on the patterns of relationships between these locations (e.g., mixed residential and commercial).

Cross-References: §§ 3-101; 3-101(n); 3-102(n); 3-104(n); 5-201(n); 8-403(n).

Section 3-104. Statements of Trends, Objectives, Policies and Standards

(1) The Local Land Development Plan shall contain statements identifying the present conditions and major problems relating to development, physical deterioration, and the location of land uses and the social and economic effects thereof, and may show the projected nature and rate of change in present conditions for the reasonably foreseeable future based on a projection of current trends, and may forecase probable environmental, social and economic consequences which will result from such changes.

(2) The Plan shall include statements of objectives, policies and standards regarding proposed or foreseeable changes in present conditions and problems and regarding any other matters of governmental concern. The Plan shall analyze the probable social and economic consequences of its objectives, policies and standards, and shall evaluate, to the extent feasible, alternative objectives, policies and standards with respect to probable environmental, social and economic consequences.

(3) The Plan may include statements regarding the coordination of the Plan's objectives, policies and standards.

NOTE

The material in this Section combines § 3-103(2) and § 3-104 of Tentative Draft No. 2. Subsection (1) authorizes the Local Land Development Plan to summarize the results of the planning studies undertaken pursuant to § 3-103 in the form of statements identifying present conditions and problems and projecting the results of current trends. These statements are intended to be descriptive, forming a basis for the normative statements authorized by the next Section.

Subsection (2) requires that the Plan contain objectives, policies and standards relating to future changes in present conditions.

The words ''objectives, policies and standards'' are used in their dictionary sense: ''objectives'' denotes ''an aim or end of action,'' a ''goal''; ''policies'' means ''a settled or definite course or method adopted or followed by a government''; ''standards'' means ''that which is established by authority . . . as a model or example; criterion.'' [Webster's New International Dictionary—Unabridged—2d Edition]. Existing statutes use the terms ''purposes, objectives, goals, policies and standards'' interchangeably. No great harm would follow a continuation of that practice. The three words have been chosen, however, to emphasize different aspects of coordinated movement in a desired direction.

The Land Development Plan envisioned by this Code is expected to be more than a record of the plans of private and public agencies. Such plans, of course, must be taken into consideration. But the planning agency is directed to formulate objectives, policies and standards, regarding *desired* development of various sorts and to make an analysis which correlates these. If, for instance, an urban renewal agency has identified various areas for renewal projects and has even indicated its priorities for expenditure of public funds in such areas, the planning agency may acquiesce in these projects and their timing, or propose that a different priority should be followed. In the first case the policy of the planning agency is to follow the recommendations of the urban renewal agency. To justify the second, the planning agency must state policies which are persuasive to the legislature.

Subsection (3) asks the planner to coordinate the various objectives, policies and standards stated within each of the subject-matter categories chosen by the community. It seeks to resolve potential conflicts at this point in time. It is probable, of course, that conflicts will not be recognized until specific actions are to be undertaken. The subsection also asks for estimates of social and economic impacts and invites evaluation of alternative sets of objectives.

Cross-References: §§ 3-101; 3-101(n); 3-105; 4-102(n).

Section 3-105. Short-Term Program

(1) A Local Land Development Plan shall include a short-term program of specific public actions to be undertaken in stated sequence by specified governmental agencies in order to achieve objectives, policies and standards stated under § 3-104.

(2) The short-term program shall cover a period of time to be specified in the Plan, which shall be not less than [one] nor more than [five] years, but the program may indicate the general nature of future actions to be taken after that period.

(3) The Land Development Plan may also include

(a) an estimate of the amounts, types, characteristics, and general locations of land to be acquired or reserved, and the transportation, utility and community facilities to be provided or aided, by the local government or other governmental agencies in order to carry out the short-term program;

(b) an estimate of the number of persons and land uses to be displaced by the short-term program, the economic and social consequences of the displacement, and any relocation programs to be undertaken by governmental agencies;

(c) a general description of any development regulations that should be adopted within the period of the short-term program in order to achieve the objectives,

policies and standards of the Land Development Plan, and an estimate of the additional trained personnel, if any, required to administer such regulations;

(d) an estimate of the cost of implementing the short-term program and a statement of sources of the public funds actually or potentially available:

(e) an estimate of the overall environmental, social and economic consequences of the short-term program including the impact on population distribution by characteristics and income, employment, and economic condition within the community and an evaluation, to the extent feasible, of the consequences of alternative short-term programs; and

(f) a statement of the assumptions regarding future private and public development upon which the short-term program is based.

NOTE

This Section contains the central planning proposal of the Code. It requires the statement of a specific ''short-term'' program to be undertaken by the local government to move towards the desired objectives. It also suggests an analysis of the economic feasibility of the recommended undertakings and an estimate of social and economic consequences which will be involved

The Section is designed to accomplish three primary aims. First, it demands that planners devote major attention to accomplishment of desired objectives rather than simply to formulating them. Second, it gives meaning to the objectives by detailing their costs and consequences. Third, it makes the plan more realistic because the programming time is short enough to be comprehended and action is more likely to flow from the plan's adoption by the governing body. This process could be compared to that used in Congress. Major legislation is subject to consideration twice. Once upon passage of a bill authorizing a program, again upon appropriation of the funds to carry out the program.

Subsection (1) envisions sequential proposals for actions such as urban renewal in one location, the creation of a park in another, the amendment of the regulatory ordinances in some particular, the construction of a hospital and a school, and the undertaking of construction of utility and transportation facilities keyed to an amendment to the regulatory ordinances permitting residential development at a new location.

Subsection (2) provides that the short-term program may cover a period of from one to five years at the option of local government.

It is not expected that the proposed actions will be fully worked out. But they should be presented in enough detail to be "specific" and to permit the making of the estimates required by subsection (3).

Subsection (3) authorizes the inclusion in the short-term program of supporting material describing the anticipated effects of the programs to be undertaken. It asks the planner to analyze the possibility of proposed actions. He is to determine the amount of land which must be acquired, the facilities which must be built, the costs which must be borne, and the revenue sources to pay these costs. Second, the subsection suggests explication of certain consequences which will probably flow from the programs. These include the probable impact of the program on income, employment and general economic conditions within the jurisdiction as well as possible relocation and redistribution of population.

These analyses are not easy to make especially given the inadequacies of contemporary data collections and computer techniques. But the planner should be urged to assure that plans propose investments and actions which serve comprehensible objectives. At first the analyses will undoubtedly be impressionistic. But as technique improves computer models may evolve which permit scientific testing of the consequences of proposed actions. These Code sections urge the planner to continue developing such techniques.

Cross-References: §§ 3-101; 3-102(n); 3-107; 3-107(n); 3-201(n); 3-202(n); 4-102(n); 8-405(n).

Section 3-106. Adoption of a Local Land Development Plan

(1) At least six weeks before adoption of a Local Land Development Plan

(a) the local governing body shall transmit a copy of the proposed plan to the State Land Planning Agency for consideration under § 8-502;

(b) the local governing body shall transmit a copy of the proposed plan to any local government or governmental agency in this State that has filed with the local governing body a written request for copies of all proposed plans; and

(c) the agency that prepared the proposed plan shall hold a public hearing in accordance with the procedures of § 2-305.

(2) The local governing body may by ordinance adopt the proposed plan or adopt it with amendments.

(3) The local governing body shall consider all comments received from any person, agency or government, but it may adopt the proposed plan despite any adverse comments, except that if objections are received from the State Land Planning Agency under § 8-502 the local governing body shall transmit a written statement in reply as required by § 8-502.

(4) The local governing body shall transmit a copy of the plan as finally adopted to the State Land Planning Agency.

NOTE

The plan is to be adopted by the local legislature. The SPEA and the acts modeled after it did not require legislative adoption of the plan but did require decisions which, in the view of the planning commission, deviated from its recommended public improvements to be adopted by an extraordinary majority of the legislature. Other state acts, however, do require legislative adoption. (See, *e.g.*, Calif. Govt. Code, § 65,357.)

The SPEA decision not to require legislative adoption was premised in part on the notion that the plan was to guide planners and administrators, not legislators. But in view of the scheme of this Code—to focus legislative attention on problems of physical development and location of activities that use land and on concrete programs aimed at their solution—legislative consideration and adoption are necessary to achieve consideration and implementation by a representative body.

Subsections (1)(a) and (b) require that the local governing body take into consideration comments made by other agencies regarding a proposed plan before adopting it.

The agency that prepared the plan is directed to hold a public hearing on the plan under Subsection (1)(c). This hearing is primarily for the purpose of informing the public of the Plan's content. No particular method of citizen participation in the preparation of the plan is required in the Code. The local governing body probably would hold its own hearings on the plan in the ordinary course of its legislative procedures. This Code makes no specific requirement for such a hearing because the Reporters prefer whenever possible to avoid requiring deviations from whatever local legislative procedures are standard in a particular jurisdiction.

The SPEA required in § 8 that the "plan commission" hold "at least one public hearing" on the plan before its adoption by the commission. The SPEA did not require adoption of the plan by the City Council. Most of the existing acts follow this model.

This Code requires adoption of a Local Land Development Plan by the legislative body before it is given any legal significance in official proceedings. It permits adoption by the legislative body in accordance with the ordinary practices and rules governing official acts of the type of local government involved. While it is customary to have a legislative hearing by a committee or the legislative body on important legislation, existing law rarely if ever requires a hearing as a condition of validity.

Representations have been made to the Reporters that the preparation and adoption process for a local land development plan should "require" citizen participation at all stages of the process. Since the circumstances of each local government and of each planning process will vary, the Reporters hesitate to make specific requirements for citizen participation and impair a local government's flexibility. However, given that prior to the adoption of a local plan a hearing must be held in accordance with § 2-305, the Code does provide an opportunity for interested persons to make their views known on a proposed plan.

A requirement that there be a "hearing" as provided in subsections (1) and (2) and that an opportunity to submit recommendations and comments be provided (See Section 2-305(4)) when coupled with the inherent power of the hearing agency to continue hearings as long as necessary and to adopt procedures for conduct of the hearing appropriate to the circumstances seems adequate to protect a community interested in protection from so-called "special interest" politics.

Furthermore, the policy of this Code is to subject planning law to the ordinary legislative process except where a special case

can be made for unique treatment. Is the problem of securing adequate citizen participation unique to planning so that special procedures to secure it should be adopted for planning law which are not needed in making appropriations, appointing a new police or school board, or in enacting a local consumer protection law? The Reporters think that a special case has not been made and that the proposals for legislating citizen participation should be addressed to a movement to reform the whole legislative process.

Cross-References: §§ 3-101; 3-107; 8-201(n); 8-502(n).

Section 3-107. Local Land Development Reports

(1) The local governing body that has adopted a Land Development Plan shall designate an agency, committee, commission, department, or person to prepare periodic Local Land Development Reports to be proposed to the local governing body.

(2) A Local Land Development Report shall contain statements (using words, maps, illustrations or other forms) of as many of the following matters as are reasonably appropriate to the community

(a) the major problems in the community relating to development, physical deterioration, and the location of land uses and the social and economic effects thereof;

(b) the extent to which the previous short-term program has accomplished its objectives;

(c) the extent to which there have been significant changes in the assumptions upon which the Legal Land Development Plan was based.

(3) The Local Land Development Report may also suggest changes in the Local Land Development Plan including reformulated objectives, policies and standards.

(4) The Local Land Development Report shall contain

a short-term program of specific public actions, as required under § 3-105 in the case of a Local Land Development Plan.

(5) The local governing body may by ordinance adopt the proposed Local Land Development Report or may adopt it with amendments after taking the preliminary steps required by § 3-106 prior to the adoption of plans. The adoption of a Local Land Development Report amends the Local Land Development Plan to the extent specified in the Local Land Development Report.

(6) The local government shall no longer be treated as having a currently effective Local Land Development Plan if it has not adopted a Local Land Development Report within one year after the end of the period of time covered by the short-term program of a previously-adopted Plan or Report.

NOTE

This Section provides for periodic reports to be prepared by a designated agency (in most cases, undoubtedly, the local agency which prepared the plan). The reports are to state the then existing problems, changes in the assumptions upon which the plan was based, recommended amendments, and a new short-term program of action. The Section also requires an evaluation of the prior short-term program and an analysis of the feasibility and consequences of the new program.

These reports are the central mechanisms for an on-going planning process. If the plan (the original framework for the process) is considerably out-of-date because of technological, economic or demographic changes, or if the infusion of new ideas or analyses of past failures considerably alters the agency's view of community goals, the preparation of a new Local Land Development Plan should be recommended. Otherwise, corrective amendments should be proposed.

It is the formulation of the new program, however, which is of prime importance. As in the case of the program provisions of § 3-105 the planning agency's attention is centered primarily on concrete means for obtaining action.

Subsection (6) (which is a revision of § 3-201(1) of Tentative

Draft No. 2) provides that in order to be treated as having a currently effective plan the local government must adopt reports within one year after its latest short-term program has expired. Most governments would probably want to adopt such reports before the expiration of the previous short-term program, but a one-year grace period is provided before the plan is treated as obsolete.

Cross-Reference: § 8-405(n);

Part 2

Reservation of Land For Public Uses

Section 3-201. Reservation of Land for Acquisition by Governmental Agencies

(1) The development ordinance of a local government may designate land as reserved for future acquisition by governmental agencies. The ordinance may specify the general development, if any, permitted in the designated areas, or may authorize the Land Development Agency to permit as special development any development that will not be substantially inconsistent with the purposes of the reservation.

(2) Areas may be designated for future public acquisition if they are shown in a Land Development Plan as needed for

(a) streets, roads, or other public ways proposed for construction or alteration;

(b) proposed schools, airports, or other public buildings or works;

(c) proposed parks, nature preserves, and other open spaces;

(d) areas to be assembled under Article 4 for development, redevelopment, or rehabilitation in accordance with a future comprehensive site plan; or

(e) areas to be acquired for any other public purposes.

NOTE

This entire Part was presented as Part 3 of Article 3 in Tentative Draft No. 2. This Section is an extension and modification of Sections 21 to 25 of the SPEA concerning buildings in mapped streets. Those provisions stimulated the adoption of "official map acts" in about one-half the states. Under the typical form of such acts a locality may adopt an official street map and prohibit the erection of structures within the mapped streets. The prohibition is valid without compensation unless the owner shows that he cannot make a reasonable use of his whole parcel without uitilizing the mapped area. (See Kucirek and Beuscher, Wisconsin's Official Map Law, 1957 *Wisc. L. Rev.* 176.)

Cases upholding setback requirements contained in ordinances other than official map ordinances provided the original legal grounds for upholding the constitutionality of a local government's reservation of land. Setback lines, it was found, were established to assure adequate light and air and thus promote the public health and welfare. Building lines, necessitating the reservation of land, were however, established to enable a city to economize by anticipating the widening of a street or opening of a park. Whether establishing setbacks or mapping future acquisitions, the city's motivation today will be a blend of both public welfare and economic considerations. While opponents of future acquisition ordinances argue that such provisions are illegal takings, proponents contend that the adoption or amendment of an official map does not divest the owner of his title to the mapped lands and that in fact, the owner will be compensated when the actual taking occurs. While this line of reasoning has been upheld in regard to setbacks, its applicability when the use of an area is prohibited or restricted is doubtful.

Proponents of land reservation argue that planning would be of little public benefit if land, for instance the beds of streets, could be developed without regard to the official map. The prospects of costly removal would result simply in re-mapping.

In *Headley v. Rochester*, 272 N.Y. 197, 5 N.E.2d 198 (1936), in which the court affirmed the right of municipalities to limit the use of areas designated for future acquisition, the Court stated:

> So long as the owners of parcels of land which lie partly in the bed of streets shown on such a map are free to place permanent buildings in the bed of a proposed street and to provide private ways and approaches which have no relation to the proposed system of public streets, the integrity of the plan may be destroyed by the haphazard or even malicious development of one parcel or tract to the injury of other owners who may have developed their own tracts in a manner which conforms to the general map or plan.

Thus the right to restrict areas which will be acquired by the government protects portions of the plan from development which might destroy or seriously injure the plan. At the same time, the right to restrict protects those citizens who act relying on the fact that the map will not be greatly changed in the future.

This Section extends the principle of these acts to lands to be acquired for any public purpose—not just streets. This Section limits the power to reserve land for public acquisition to governments which adopt Local Land Development Plans. The reason for this is that a coordinated and thoughtful consideration of future needs seems a basic prerequisite to taking land off the market and reserving it for acquisition for specific uses. Moreover, the impacts on individual owners can be severe and they should not be vulnerable unless a program of acquisition and improvements has been developed which provides some certainty of expectations. It is to be expected that short-term programs adopted pursuant to § 3-105 will contain plans for land reservations.

Subsection (1) permits a reservation ordinance to prohibit all development in the designated areas or to permit that development (otherwise permissible under the regulatory ordinances) which is considered consistent with the purposes of the reservation. For instance, a locality might permit a riding stable in an area scheduled for park acquisition. In addition the agency may authorize as special development any development that will not be substantially inconsistent with the purposes of the reservation.

The general rule is that mere plotting or planning in anticipation of a public improvement is not a "taking" or damaging of the property affected and therefore gives the landowner no cause of action. *Bauman v. Ross*, 167 U.S. 548, 596; 17 S. Ct. 966; 42 L. Ed. 270 (1896). In *Selby Realty Company v. City of San Buenaventura*, 10 Cal.3d 110, 514 P.2d 111, 109 Cal. Rptr. 799 (1973) the California Supreme Court denied a claim for relief by a landowner whose land was crossed by a proposed street shown on a plan:

> If a governmental entity and its responsible officials were

> held subject to a claim for inverse condemnation merely because a parcel of land was designated for potential public use on one of these several authorized plans, the process of community planning would either grind to a halt, or deteriorate to publication of vacuous generalizations regarding the future use of land. We indulge in no hyperbole to suggest that if every landowner whose property might be affected at some vague and distant future time by any of these legislatively permissible plans was entitled to bring an action in declaratory relief to obtain a judicial declaration as to the validity and potential effect of the plan upon his land, the courts of this state would be inundated with futile litigation. It is clear, under all the circumstances, that plaintiff has not stated a cause of action against the county defendants for either declaratory relief or inverse condemnation. (10 Cal.3d at 120-22)

If the landowner seeks to develop his land in a manner inconsistent with the plan he would of course be able to challenge the reasonableness of the plan under the Constitution and this Code by appealing under Article 9 from the denial of his application for a development permit.

Cross-References: §§ 3-101(n); 8-301(n); 11-101.

Section 3-202. Time Limits on Designation

No land designated by the ordinance shall be subject to restrictions under this Part beyond the time shown in the ordinance for their expiration which shall not be more than the period of validity of the short-term program of specific public actions contained in the Local Land Development Plan in force at the time of the adoption of the ordinance, but the land may again be designated for reservation in accordance with the procedures for initial designation.

NOTE

This Section limits the effective time period of any reservation of land for future acquisition to the duration of the short-term profrom that has been adopted as part of the Local Land Development Plan. Under Section 3-105 this period of time is limited to five years and may be as short as one year.

The Reporters believe it would be inequitable to permit a local

government to restrict the use of land unless it had definite and immediate plans for its acquisition. By requiring that such plans be contained in the short-term program the Code automatically limits the duration of the reservation and insures that careful consideration has been given to the proposed land acquisition.

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The Goals of Comprehensive Planning

The Ideal of Comprehensive Planning

Those who consider themselves comprehensive planners typically claim that their most important functions are (1) to create a master plan to guide the deliberations of specialist planners, (2) to evaluate the proposals of specialist planners in the light of the master plan, and (3) to coordinate the planning of specialist agencies so as to ensure that their proposals reinforce each other to further the public interest. Each of these functions requires for ideal performance that the comprehensive planners (a) understand the overall public interest, at least in connection with the subject matter of their plans, and (b) that they possess causal knowledge which enables them to gauge the approximate net effect of proposed actions on the public interest.

This chapter is concerned with some ways in which city planners have approached the former of these two requirements, which—contrary to most students of planning—I consider the more interesting one. If comprehensive planners deal with a great many more areas of public policies than specialists, their factual and causal knowledge in each area is bound to appear shallow—at least by comparison with that of the specialists in it.[1] Hence their claims to comprehensiveness, if they are to be persuasive, must refer primarily to a special knowledge of the public interest.

Every government planner of integrity, no matter how specialized, must be guided by some conception of the public interest.

[1] This theme will be taken up again in Chap. VIII.

And since plans are proposals of concerted action to achieve goals, each must express his conception as a goal or series of goals for his community. He will probably conceive these goals, of course, as constantly shifting rather than highly stable, as always intermediate rather than final, and as more in the nature of criteria than of concrete destinations. Community goal conceptions are likely to have these characteristics because of the limitations on collective human foresight and imagination. Nonetheless it is impossible to plan without some sense of community goals, call them what you will.[2] Moreover, for the planning process in any community to be democratic—and I assume in these pages that it should be—the goals must win approval from a democratic political process; they must not be goals simply prescribed for the community by planners.

In this chapter we shall examine a few of the difficulties that face planners as they strive to determine community goals democratically. In the next two chapters we shall deal with the difficulties they face as they try to concert action.

Implications of the Ideal

The comprehensive planner must assume that his community's various collective goals can somehow be measured at least roughly as to importance and welded into a single hierarchy of community

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[2] A few planners, mainly in the universities, have recently come to doubt this. They are taken with Herbert Simon's model of "satisficing" administrative man, which I believe they fail to understand thoroughly. Several have suggested to me that this model shows up all talk about the need for planning goals as irrelevant. The satisficing model is set forth in Herbert Simon and James G. March, *Organizations* (New York: John Wiley and Sons, 1958), esp. pp. 140–141, 163, 175; Herbert Simon, *Models of Man* (New York: John Wiley and Sons, 1957), Chaps. 10, 14, 16; and Herbert Simon, "Theories of Decision-Making in Economics and Behavioral Science," *American Economic Review,* LXIX, No. 2 (June 1959), p. 253–283.

According to Simon, most theorists until recently accepted the model of "maximizing" (economic) man. Maximizing man was assumed to have all the alternatives that he needed before him and to be able to rank them all with reference to the desirability of their consequences. His ranking ability rested on his possession of a "utility function," which amounted to his values or goals. For purposes of simplicity, I am leaving out here the issue of his ability to forecast consequences. Let us deal in this discussion only with the evaluation of foreseeable consequences.

Satisficing (administrative) man, on the other hand, is moved by stimuli ("e.g.," writes Simon, "a customer order or a fire gong") to search for alternatives. When he finds one that is "good enough," he intelligently avoids spending time, energy, and resources on further search.

Simon himself tends to be indifferent to high-level goal determining processes, so it is understandable that some planners should have concluded that satisficing man does not need goals. According to their interpretation, the determinants of satisficing man's choices are largely, perhaps mainly, subconscious. He knows that in any case most of the consequences of any choice are incomparable on any single operational scale of value. Consequently, being a practical man rather than a utopian intellectual, he reconciles himself to the fact that his choices are bound to be essentially intuitive. From the standpoint of an outsider, the evidence that an alternative is satisfactory is bound to be no more than that it has been chosen.

The above is a misinterpretation of Simon. In his sustained discussions of satisficing Simon always makes clear that one can only speak of an alternative's being satisfactory if it meets standards set prior to its selection. Standards, however, are neither more nor less than goals. If they are not ultimate goals, they must ultimately be evaluated on the basis of their relation to ultimate goals. The very notion of formulating precise standards of adequacy at the beginning of a search for alternatives is, it strikes me, a more literal application of means-ends language than is normally feasible at the higher levels of politics and administration. The processes of balancing ideals, estimates of feasibility, and probable costs of further search are generally far more subtle than this language suggests. The phrase that Chester Barnard frequently used, "successive approximations," seems more appropriate here. This does not mean, however, that general discussions of goals and priorities can be dispensed with in any meaningful planning exercise.

More generally, it may be noted that the satisficing model, even correctly understood, hardly represents a major advance in our understanding of human psychology. The maximizing model has long been recognized as an ideal type, a useful measuring rod against which to compare optimal aspirations with achievements, rather than as a descriptive model of human choice. It has been most useful in economics, where it has been feasible to hypothesize a single substantive goal for actors other than ultimate consumers. Use of the satisficing model, on the other hand, requires that we have substantive knowledge of such variables as the values of actors, the costs of search, and the obstacles to implementation of particular proposals. Unless observers have such knowledge, the satisficing model approaches the conception of it held by the planners mentioned above. It tells us nothing about why any particular actor considered any particular standard "good enough."

One other point worth stressing is that Simon's actors typically assess values, and consequently the significance of obstacles and costs, in purely subjective fashion. Consequently, Simon's theories are essentially theories of irresponsible choice. This may not seem terribly significant when decision-makers are objectives. In addition, he must argue that technicians like himself can prescribe courses of action to achieve these objectives without great distortion or harmful side-effects of a magnitude sufficient to outweigh the gains achieved through planning. We may conceive a continuum of faith in the feasibility and desirability of comprehensive planning. The "ideal type" defender of comprehensive planning would contend that a serious effort should be made to plan in detail the future evolution of all important economic and social patterns. Others would limit their support to the planning-in-general-outline of change in particular strategic variables.

Those who contend that comprehensive planning should play a large role in the future evolution of societies must argue that the common interests of society's members are their most important interests and constitute a large proportion of all their interests. They must assert that conflicts of interest in society are illusory, that they are about minor matters, or that they can be foreseen and resolved in advance by just arbiters (planners) who understand the total interests of all parties. Those who claim that comprehensive planning should play a large part in the future evolution of any particular economic or societal feature have to assume similar propositions with regard to conflicts of interest likely to arise in connection with it.

To the extent, then, that comprehensive planning is possible, the correct law for a society is something to be discovered, rather than willed, by public officials. The role of the politician who ignores consistency or obstructs grand schemes to placate interest groups is hard to defend. So is the concept of majority will, and the idea that party conflict is desirable. It is in this sense that the claims of planners often seem to be in conflict with those of politicians. Both claim a unique ability to judge the overall public interest. The politician's claim rests on his popular election, his knowledge of the community, his sensitivity to human needs, and his personal wisdom. The planner's claim is one of professionalism and research. If it seems somewhat devoid of human warmth, it also sounds more authoritative, more precise, more modern. As will be seen shortly, I have no wish to imply that city planners and politicians must (or, indeed, invariably do) defend their work on the basis of conflicting assumptions. It may well be that the capacities of planners and politicians are, for many purposes, suited to complement each other. Here we are not discussing everything that men called planners do, but rather some implications of the concept "comprehensiveness" in planning.

Few sophisticated American defenders of planning, certainly, believe that any group of planners can achieve a total comprehensiveness of perspective on any issue. Many do believe, however, that professional planners can come closer to achieving it on numerous vital issues than other participants in the urban deci-

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choosing for themselves alone—as in the market—or for hierarchical organizations that have no pretensions of democracy or of responsibility to nonmembers. Such theories make both criticism and justification of choices on the basis of value considerations impossible, however, and this does matter in a democratic polity.

In *Organizations* Simon and March discuss the satisficing model in their chapter entitled "Cognitive Limits on Rationality." By contrast, my concern is with social and political obstacles to rationality. My purpose in these pages is political, not psychological, analysis. The approach taken here is that of the politician or citizen confronted with conflicting expert arguments, and anxious to decide wisely. Either may decide whimsically in the end, but it seems both nihilistic and paralyzing to assume in the beginning that no more is possible. It is also untrue, except in a number of rather obvious senses. The goodness of ultimate goals may not be demonstrable, but they are generally not the controversial ones. All the others can be analyzed and compared in terms of the consequences, unintended as well as intended, likely to flow from pursuing them. Simon specifically admits this, but he relegates scholarly consideration of such analyses and comparisons to the Siberia of "philosophy." His followers, whether "practical men" or self-conscious "scientists," are thus led to ignore these matters. I consider this unfortunate. (This viewpoint is elaborated in my introduction to a forthcoming reader that I have edited, entitled *The Politics of American Public Administration* [New York: Dodd, Mead & Co., 1966].)

Moreover, most planners themselves consider it essential for them to be able to demonstrate the nonarbitrary nature of their recommendations. I believe that Paul Davidoff and Thomas Reiner, in their recent article, "A Choice Theory of Planning," have articulated a major preoccupation of the profession in writing: "We are concerned with the problem, so trenchantly posed by Haar, that a major task confronting the planner is to see that he acts in a nonarbitrary manner, administratively as well as conceptually. We develop in these pages a theory of nonarbitrary planning." (*Journal of the American Institute of Planners*, XXVIII, No. 2 [May 1962], 103–115. The quotation is at p. 103. The piece by Charles Haar referred to is: "The Master Plan: An Inquiry in Dialogue Form," *Journal of the American Institute of Planners*, XXV, No. 3 [August 1959], 133–142.) It is clearly impossible to plan nonarbitrarily without knowledge of the proper goals for the planning endeavor.

sion process. The primary purpose of this chapter is to explore the theoretical foundations of this belief. It should be noted, however, that the explicit claims of practicing planners often seem to suggest that a fair approximation of genuine comprehensiveness is currently attainable. The case studies in this volume provide a number of illustrations.

Case Study Illustrations

In his introduction to the *St. Paul Land Use Plan,* for example Herbert Weiland, the St. Paul planning director, described his conception of the planning function in these words:

> The total city planning process, of which land-use planning is but one part, involves a continuing program of deriving, organizing, and presenting a comprehensive plan for the development and renewal of [the city] . . . The plans must be economically feasible, and must promote the common good, and at the same time [must] preserve the rights and interests of the individual.

Long discussions with every planner involved in the preparation of the St. Paul plan persuaded me that these words were meant literally. City planning was comprehensive and for the common good, not for any lesser objectives.

Several members of the St. Paul planning staff were highly critical of C. David Loeks, Weiland's predecessor, for having offered advice freely to operating agencies without first developing a comprehensive plan. Loeks himself, however, had also conceived his responsibilities broadly, though he had not considered the time ripe for explicitly comprehensive planning during most of his tenure. He had written in the Planning Board's 1957 publication, *The Proposed Freeways for St. Paul,* for example, that while others had considered the cost of freeways and their effect on traffic, the Planning Board had "special responsibilities posed by virtue of its function and status as an advisory representative citizen's group concerned with the development of all facets of the community's life." [3]

In considering the development of Ancker Hospital, politicians turned finally to city planners to interpret the overall public in-

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[3] *The Proposed Freeways for St. Paul,* Community Plan Report 4, June 1957, p. 30.

terest. First the city planners in the St. Paul Housing and Redevelopment Authority, and eventually those in the City Planning Bureau as well, accepted the challenge with confidence. When interviewed, both groups of planners stated without hesitation that they were better equipped to interpret the public interest than the consultant hospital architect, whose primary concern was how best to build a hospital. They believed that because their perspective was broader, their recommendation was highly likely to be wiser, or more rational.[4]

In formulating the *Central Minneapolis Plan,* Rodney Engelen, with the full support of Planning Director Irvin, cast his arguments in the broadest possible terms. The operational goal of the *Plan* was clearly a limited one: economic growth. Engelen, however, felt that he had to justify the goal itself. He stressed the functions of downtown as bearer of culture, disseminator of news and ideas, haven for unique activities, supplier of taxes to support all public services, and so on. When interviewed, he emphasized that his concern was to enrich the lives of all citizens, not to line the pockets of downtown businessmen. It was merely fortuitous, he believed, that in this case the interests of property owners and those of society coincided. He realized that on many subjects this coincidence did not exist, or was not perceived, and that in such cases the political implementation of the public interest might be impossible.

Engelen admitted freely that no plan or evaluation could be entirely comprehensive, as did all the planners interviewed for this study when pressed. His (and their) disclaimer was perfunctory, however, as if only a minor detail were at stake. Engelen wrote, for example, that the *Central Minneapolis Plan* could not truly be termed comprehensive because "there are and will always be elements—new aspects—yet to be studied and yet to be decided upon." He thus rejected a conception of comprehensiveness that I have suggested is useless: i.e., that the comprehensive plan should deal with everything. In short, he admitted that the object of any decision is necessarily limited, at very least in time, but he preserved the implication that the planner's approach—i.e., his goal orientation—to the object may be comprehensive.

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[4] Planners tend to use the words "rational" and "wise" interchangeably in evaluating public choices. This is in accord with the usage of natural law philosophers, but not with that of contemporary economic and social theorists. For the latter, the term "rational" refers to the efficiency of means where ends are known. "Wisdom" refers to deep understanding and the ability to make what are considered "good" judgments on complex human issues, when goals and efficient means are not generally known.

Consequently, the planners use of the word "rational" in the classic sense to defend their distinctly modern "expert" recommendations makes for some confusion of thought. This confusion has a political function, however. It conveys the impression that expert logic or technique can produce "good" decisions on complex human issues.

The Search for Planning Goals

All Twin Cities planners agreed that community goals could in the final analysis be discovered only through public discussion. Planners might propose alternative articulations, but goal statements could have no claim to represent community thought unless the community or its legitimate representatives ratified them after serious discussion and deliberation. In theory the primary problem was to guide the discussion and to decide when it had gone on long enough. The primary problem in practice, it developed, was to get a discussion going.

St. Paul's planners hoped, for example, that vigorous discussion would follow publication of their *Land Use Plan*. No one showed any interest in discussing it, however. The reason seemed to be that the *Plan*'s stated goals were too general. No one knew how the application of these goals would affect him in practice. Those who were not completely uninterested in the *Plan* had learned long ago to be suspicious of high-sounding generalities. The planners had not succeeded in showing opinion leaders the relationship between the *Plan*'s stated general goals and its great mass of "standards," or more specific goals. As a result, nonplanners decided with uncoordinated unanimity to ignore the *Plan* until someone proposed specific applications of it. Only at this point, they felt, would there by anything comprehensible—whether or not comprehensive—to argue about.

Minneapolis planners argued that the St. Paul planners' premises were wrong, and would have been wrong even if discussion of their plan had developed. For a discussion truly to influence the planning process, they said, it had to begin before detailed planning got under way. In their view, no one could effectively

interpolate changes into a plan after it was complete without upsetting its internal harmony. If one of the goals of a plan were changed, then in theory every specific recommendation should be altered to some extent. No one had the time or intellectual energy to do this when a plan had already taken definite shape, however. The crucial phase in the evolution of any plan, then, was the development of its first draft. Goals should be determined before this phase moved far along.

Minneapolis planners themselves tried to obtain approval for planning goals before developing their central area plan. They decided at the start that they needed a goal statement which would be both "operational" and acceptable to all "reasonable" citizens of the city. By "operational," they meant that progress toward the goal could be objectively measured, and that the broad costs, both tangible and spiritual, of striving toward it could be foreseen. Comprehensive goals, they judged, could not be operational. Therefore, reasonable men could not pass on them intelligently. It followed that goals could win intelligent public approval only if they were partial. The question was: *how* partial? Perhaps it was possible to articulate, and plan to achieve, highly general goals even if not truly comprehensive ones.

They endeavored to bring about a public discussion of essential goal options before preparing the detailed plan. Fortunately, planners and planning consultants throughout the nation had applied themselves to downtown problems in recent years, and had developed a more or less integrated theory explaining characteristic downtown problems. Consequently, Minneapolis planners were able to present their preferred goals with tightly reasoned arguments behind them. The parts were related and mutually reinforcing. The man of affairs with a limited amount of time could quickly grasp the objectives and the main lines of reasoning on which the recommendations were based. The most general operational goal that the planners proposed was "the economic growth of downtown." They recognized that this goal was itself deceptive, however, in that although it sounded noncontroversial the steps necessary to its accomplishment could not keep from being controversial. In their publications on downtown planning goals, therefore, they chose to emphasize what they termed "design goals." These were in fact *types* of projects—rather than project proposals for specific streets and blocks in Minneapolis—that had been tried in other cities. The planners tried to explain the relationship between these types of proposals and the economic problems facing urban downtowns in the current period. It was possible to discuss the types of dislocation that might be expected, and so on, without bringing in specific project proposals. The discussion was really a model of comprehensible argument in favor of middle-range (i.e., operational but still general) planning goals. I strongly doubt that existing theory was sufficiently developed to support comparable justifications of goal recommendations in any other area of city planning activity.[5]

Even in this area, however, the specific financial costs and unintended side-effects that would arise on application in Minneapolis were difficult to foresee. Any intelligent discussion of planning goals had to take these (or their unpredictability) into account. For the discussion to be fully useful, the planners judged, its participants had to be willing to inform themselves about planning detail at some significant expenditure of time and effort. The discussion had to continue throughout the planning process, which itself would have peaks of activity but no final termination. Since the overall goal was partial, the discussants had to be urged to consider the full complexity of its side-effects. This they could not do if they confined themselves to examination of the central economic reasoning behind the "design goals."

The first problem was how to find discussants. The comprehensive planner's search is more complicated than that of any specialist. He cannot be satisfied to consult a narrow constituency. Presumably he should understand every important goal of each of society's members. If he must deal with groups rather than individuals he should not limit himself to constellations of interest that maintain permanent formal organizations. But the planners knew of no way to approach the city's "potential" groups. These

would not become actual groups unless some immediate threats activated their potential members; some potential groupings of interests that the observer might identify would not become actual even then. Even those in the first category, however, had no leaders to speak for them. The abstract discussion of goals could seldom seem sufficiently immediate to spur them to organize and choose representatives. It seemed that in no other public endeavor than general goal determination was the disproportion greater between the number of groups that *might* reasonably become involved and the number that *would*.

The planners soon found that they could carry on a continuing discussion only with men whose jobs required them to spend time on the study and discussion of civic affairs. Only a few organizations in the city had such men on their payrolls. All of these fit into a few categories. Most were large downtown business firms or organizations of businessmen. A few good government groups (supported mainly by the contributions of businesses or businessmen) had representatives who took an interest in city planning, but for the most part they were in the same position as planners: they could talk abstractly about the public interest but they could not claim any special qualifications to represent particular interests. The other permanent organizations in the city did not bother to have representatives spending the bulk of their time observing civic affairs. Each had a few continuing interests (racial issues, taxes, city hiring policy, etc.) and became politically active only when immediate threats to these arose.

Making the best of this situation, the planners tried to carry on a discussion of goals with the professional "civic affairs" represensatives of downtown business. These professional discussants, however, lacked the power to commit their firms to anything; consequently, as the discussion became more specific they became more and more noncommittal. The businessmen who had the power to commit their firms to specific courses of action had neither the time nor interest to engage in almost endless discussion with the city planners. In a short while, even the professional discussants found that they had no time to study each tentative planning formulation with care. Thus, a major difficulty was revealed. Even had the planners been able to handle all the complexity of life, they would not have found laymen willing or able to evaluate their work.[6]

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[5] A major reason for this was probably that in no urban section but downtown did simple economic goals appear entirely plausible. Outside the United States, planners rarely considered them so even for downtown. See, for example, the British Town and Country Planning Association's analysis of central London problems: *The Paper Economy* (London: Town and Country Planning Association, 1962).

If it can be so difficult to spur well-informed discussion even of such limited goals as those of the *Central Minneapolis Plan,* the question necessarily arises: what should be considered an adequate discussion of planning goals? Was the discussion in this case adequate although its only participants were businessmen whose interest in the discussion was mild and who were concerned only with direct economic costs and consequences? One might say that it was, because other groups could have entered the discussion to raise additional points had they wished. I did not find any elected officials in Minneapolis, however, who accepted this reasoning. Most were rather inarticulate about their objections, but a few were able to state their views quite precisely.

Downtown businesses are, according to these objectors, "organizations in being." Their owners are accustomed to watching the civic scene and searching for issues likely to affect their interests. They enter the discussion of any proposal at a very early stage and understand its potential impact on their interests relatively early. Other members of the public, however, tend to became aware that something is afoot and then to conceptualize their interests more slowly. After the perception begins to dawn, most take quite some time to organize. The range in the amount of time, and in the degree of immediacy of a threat or opportunity, that it takes to move different types of people with potential interest in a

proposal to the threshold of organizational expression is enormous. Government never moves slowly enough or poses issues clearly enough to give everyone his say. It is fair to assume, however, that only when government moves at a snail's pace and deals with issues of rather direct and immediate impact can a significant proportion of the great multitude of interests express themselves. Therefore, comprehensive democratic planning is virtually impossible. No legislature or committee of interest group leaders can rationally evaluate a statement of comprehensive goals. Its members cannot, in the absence of specific project proposals and citizen reactions to them, predict how the countless measures needed to accomplish the goals will affect the overall quality of community life or the interests of their own constituents and organizations. Consequently, they are likely to prefer operating on levels where comprehension and prediction are most feasible, even if this means fragmenting policy choices rather than integrating them. In practice, this means that they will rarely commit themselves to let general and long-range goal statements guide their consideration of lower-level alternatives.

There are no doubt many local politicians in America who would not find the preceding argument a compelling one. In localities lacking a coherent "power elite" firmly committed to a plan, however, it has a high degree of plausibility as a prescription for political survival. Its specific dictates are bound to be, at a minimum, a "project" rather than a "general planning" orientation and a disinclination to deal with controversial issues.

Systematic Criticisms of the Comprehensive Planning Ideal

The crucial assumptions of those who claim that comprehensive democratic planning is possible and desirable have of course been challenged more systematically than this. Martin Meyerson argued in a 1954 article that the major attacks could be divided into two types.[7] The first is that planning limits the range of individual choice by imposing centrally made decisions. The second is that planning requires "vastly more knowledge . . . about a huge variety of factors" than can be obtained or grasped by any individual or closely integrated group. Meyerson asserted that the few who had tried to answer these criticisms had been more successful in answering the first than the second. They had answered the first by saying that freedom is opportunity, not just the absence of restraint; and that planning agencies are created because people sense a failure of the market and of politics to satisfy their desires. As for the second question: unfortunately, wrote Meyerson, "we all know" that the assertion that planning can provide a rational basis for substantive policy decisions is just a goal today. The danger, he went on, is that planners will become content for it to remain a goal. He left the problem with a call for research.

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[6] From their viewpoint as political administrators, on the other hand, Minneapolis planners and their consultants won a major, and far from inevitable, victory in persuading the professional discussants that the general lines of economic reasoning in the *Central Minneapolis Plan* were valid, and that a plan based on them would quite probably benefit downtown business. After all, even the contribution of a plan to economic growth—let alone to the public interest—was impossible to predict and difficult to identify after the fact. Trend changes after specific actions were taken were possible to measure, but no one could prove that the actions studied had caused the result. Only comparative analysis of many cities could begin to test the efficacy of particular methods, and reliable comparative data were rare.

Still, the arguments of city planners in their role as economic planners had a hard-headed quality seldom present in their other work. They wrote as though from having defined their goal clearly they could identify the major bars to progress toward it without much trouble. Knowing the enemy, they could conceive tightly reasoned, even if untested, lines of attack.

[7] "Research and City Planning," *Journal of the American Institute of Planners,* XX, No. 4 (Autumn 1954), 201–205.

It is questionable, however, whether planners have answered even the first objection successfully. Though it is certainly true that freedom consists of opportunity as well as the absence of restraint, there is little agreement as to whether planning to date has anywhere in the world produced more opportunity *in toto* than restraint. Only "commonsense" estimates are possible, as any more precise balance sheet would have to be based on determinations of the significance of particular opportunities and restraints. Neither the philosophic (assuming values to be objective) nor the scientific (assuming them to be subjective) foundations for such determinations exist. Second, the fact that people sense a failure of the market and the political process to meet their needs hardly forces one to conclude that they are better satisfied with the planning process. A reading of American city planning publications, not to mention conversations with numerous practicing planners, reveals a preoccupation among city planners with the failure of their work to win popular approval. Moreover, the winning of popular approval would itself prove very little. Planners themselves do not hesitate to bemoan the unwisdom of many popular governmental programs. They emphasize that the public must be educated by its leaders to favor comprehensive planning. They admit that the unguided public is likely to prefer an alderman who does petty favors for constituents to one who studies the city's overall needs.

Those who have made this first objection to comprehensive planning have generally emphasized that ambitious plans can only be realized through the generous exercise of public power. They

have contended that every grant of power to government increases the chance of its abuse, increases the pervading influence of bureaucracy and red tape in the lives of citizens, decreases the self-reliance of citizens, and, as the habit of delegating tasks to government becomes prevalent, undermines their healthy suspicion of those who wield power. They have said that those charged with taking a comprehensive view of political problems are necessarily charged with safeguarding the complex requisites of the social and political system entrusted to their care. In the case of American society, this means a system in which the rights of individuals to wide spheres of personal freedom are recognized.

If the planner is truly to think comprehensively, in this view, he must consider not only the goals of society, but also the framework within which these goals can be pursued. If all proposals to enlarge governmental power threaten the framework of individual liberty to some degree, the planner must share society's initial bias against them. Those who oppose planning have generally asserted that planners have a professional bias in favor of bigger and bigger government, less and less subject to pressures from interest groups. Planners, they say, are in the business of creating new proposals which call for governmental activity. The planner's own interest is in the success of his plans: that is, in additional governmental activity *ad infinitum*. Most grants of power to government are long-term ones, because the electoral process is ponderous and inflexible. To reverse a major decision once ratified is extremely difficult, though it happens occasionally, as with Prohibition. The general pattern is for public interest to focus on an issue for a short while, and then move on. The planner's bias in favor of ever-larger government should therefore disqualify him from evaluating either his own proposals or those of others. Demands for public action in modern society are so numerous that only by subjecting each to the most searching criticism, based on an initial negative bias, can the trend toward concentration of power (which admittedly cannot be stopped) be slowed to a moderate rate. When government must act to deal with some pressing issue, every effort should be made to define the problem narrowly and to deal with it specifically. The approach should be one of dealing with bottlenecks, not planning the whole production line. In other words, it should be piecemeal, not comprehensive.

If these are some of the views intelligent people still can hold regarding the issue that Meyerson says planning defenders have dealt with rather successfully, we may expect to have considerable difficulty in dealing with the one he says planners have been unable to handle. In part the problem is, as Meyerson says, the inability of planners to know about the interrelations of a huge variety of factors. But every profession deals with matters of incredible complexity. No profession can bring order to the mass of facts until it knows what it hopes to accomplish. From its goals, the members of a profession can derive criteria for judging the importance of facts. Using these criteria, they can develop theories about which consequences of specific types of proposals are the most important to control. The next step is to develop techniques for controlling these consequences. All specialists have lists of techniques for dealing with the characteristic problems they encounter. Planners too have some when they act as specialists. The floor-area ratio, for example, is a characteristic device used to resolve an aesthetic problem: the fact that rigid height and bulk building regulations yield unvaried architectural patterns.

This need for criteria, however, returns comprehensive planners to their basic problem. To develop theories about what they should know when creating comprehensive plans or evaluating specialist plans comprehensively, they need to know society's goals. Unless society has goals that can be discovered and applied, the task of theory building cannot begin. The difficulty of dealing with factual complexity will always seem insuperable, though the truly insuperable difficulty may be that of defining the aims of the theory-building endeavor. The market and political bargaining processes depend on the assumptions that only individuals have goals,[8] that these normally conflict, and that the mysteries of bargaining yield the best results possible for men. The planner cannot rely on a hypothetical invisible hand; he must validate his claim to arbitrate, whereas the bargainer must only validate his claim to negotiate. Planners cannot claim to arbitrate on the basis of their own views of the public interest. If there are important conflicts of interest in a society that cannot be resolved to the advantage of all parties, then planners require the guidance of a strong political arbitrator. The alternative is a conception that essential harmony underlies all apparent clashes of interest.

The view that clashes of interest are only apparent has always appealed to one element of the American intellect. It is assumed by most conservative defenders of laissez-faire no less than by progressive attackers of "politics." Marver Bernstein reminds us, for example, that almost all American movements for regulatory legislation have had to adjust their arguments to this conception. In order to have any chance of success, they have had to protest their general disapproval of public action, even while saying that in this particular case it was needed to stop flagrant abuses by a few unscrupulous individuals. The ostensible purpose, always, has had to be restoration of the natural harmony of interests.[9] We may conceive a progression of steps in "natural harmony" thinking from support of laissez-faire, to regulation of specific abuses, to comprehensive planning. Laissez-faire theorists, of course assume that the interests of mankind are best served with no conscious coordination of effort. Theorists of regulation assume that just as healthy human organisms often require treatment for specific ills, so with healthy economic and social systems. The next step is to say that social and economic systems are not very good self-regulators, but rather require constant, carefully planned direction and care if they are to perform adequately. In this view, suitable to an age which accepts positive government, nature provides the common ends but human intelligence and elaborately coordinated effort are required to choose and implement the proper means of achieving them.

Those who reject comprehensive planning meet this reasoning in a variety of ways. Let us consider two of those which seem most plausible.

First, many writers, including the authors of *The Federalist*, have contended that conflict of interest is an invariable feature of all societies, and that the worst conflicts of interest are between those who manipulate governmental power and those who do not. By this view, whenever all those who possess governmental power are able, let alone encouraged, to synthesize their interests into a comprehensive goal, the rest of society had better watch out. A corollary of this position is that the few goals shared by all the members of society are not the goals most important to individuals. Thus, the primary function of government should be to provide an ordered framework in which civilization can prosper. The framework may be indispensable, because freedom is meaningful only within civilized society, but from the individual's viewpoint it is still only a precondition, not a preeminent goal in itself. Except during moments of supreme crisis for a society, in this view, the normal thing is for its members to differ, for each to want to seek happiness in his own way with a minimum of organized societal interference. This argument leads naturally into the argument against planning outlined above on pages 312–313.

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[8] Readers will note that I say the political *bargaining* process depends on this assumption, not the political *discussion* process.

[9] Marver Bernstein, *Regulating Business by Independent Commission* (Princeton: Princeton University Press, 1955), Chaps. 1, 2.

Second, there are those who say that even if human interests harmonize and "big government" must be tolerated in modern life, the goal of comprehensiveness in decision-making should be viewed with the utmost suspicion. These critics do not, any more than those whose views are outlined above, recommend the banishment of intelligence from the handling of human affairs. They say only that the ways of the world are often contrary to logic. Logically, the wisest decisions should be those made at the highest level, where the widest range of arguments can be considered. But in fact, because the human mind can grasp only a limited number of considerations at any time, decision-makers at the highest level can act only by drastically over-simplifying their choice problems. According to this view, any comprehensive scheme is a Procrustes bed. The decision-maker does better to recognize the unforeseen and the unique in every situation without rigid preconceptions. He can, when "other things are equal," endeavor to harmonize each day's decisions with those taken previously, but he should recognize that other things often are *not* equal. What is lost in administrative unity when the piecemeal approach is employed is made up in superior contact with public opinion and the special needs of each situation.

The greatest virtue of the piecemeal approach, in this view, is that it poses a large number of policy questions. The comprehensive approach implies that politicians need only approve general policy statements periodically, leaving the rest to be deduced by experts. Politicians not unnaturally react to this idea with hostility. They recognize that if they are to be the actual deciders of

policy, they must exercise their influence continuously, at levels of generality sufficiently low so that their decisions may affect the matters of interest to their constituents. They may forego interference with administration below certain levels of generality, but they must never let administrators persuade them to set the cutoff point too high. The question of where it should be is always debatable, of course. Highway engineers tend to think that the setting of highway routes should be a technical endeavor. Others, including city planners, often complain that highway engineers are inclined to handle the side-effects of route location—which may be as important as the intended effects—as peripheral matters. In a democracy, the administrators can advise but they cannot determine finally which side-effects are too important for them to handle themselves, or to ignore.

Pressure groups have a similar interest to politicians in the piecemeal approach. Their members typically are interested in direct and immediate consequences to themselves, not in the overall public interest. It is a value of the piecemeal approach that interest groups can deal with questions their members care about. They need not feel that by the time their members become aware of any threat or opportunity the issue will have been foreclosed by prior community approval of generalities. Interest groups depend for their survival on issues which move their members and on at least occasional partial successes.[10] A vigorous public opinion in turn cannot survive without vigorous interest groups, whose leaders articulate issues, command attention in the mass media, and assure supporters in dissent that they are not alone. In the absence of strong evidence to the contrary in any particular society, therefore, it should be assumed that whatever saps the vigor of interest groups saps the vigor of democracy. The ideal of comprehensive planning seems ultimately antagonistic to the level of group conflict which typically characterizes stable democratic societies. It casts doubt on the very value of public discussion, at least after the stage of determining general goals. If a group of planners can comprehend the overall public interest, then any challenge to their specific proposals must be attributable either to their own incompetence or lack of integrity, or to the selfishness and shortsightedness of their critics. Faced with such polar explanations, those who take the side of the planners are apt to conclude that competition among parties and interest groups is alien to the public interest. Dictators frequently employ this very logic to defend their systems.

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[10] Not all interest groups need *political* successes, of course, because not all are primarily political in their orientation. Business firms, labor unions, and churches, for example, can retain their memberships without engaging in politics. They tend to retreat from politics, however, and thus to disappear as *politically significant* interest groups, when their members perceive public discussion as invariably fruitless.

Defenders of planning may meet these criticisms in part by saying that they do not rely on the idea of a comprehensive harmony of human interests. They may contend merely that maintenance of a framework in which civilization can flourish is an enormous task, requiring all of man's ingenuity and foresight. Pressure groups are currently so vigorous, they may continue, and comprehensive planning is so weak, that concern for maintaining the divisive forces in our society at adequate strength is misplaced. Even if ideal comprehensive planning is impossible and in theory "big government" threatens democracy, they may conclude, democratic societies must strive toward the first and tolerate large doses of the second if they are to meet the challenge of modern welfare expectations and rapid technological change. This argument is highly plausible, but here as elsewhere serious debates center around location of the cutoff points, and planners suffer from lack of a theory to justify their positions in these debates.

To critics of planning there is an essential difference between public actions to meet crisis threats to crucial societal values and actions to ameliorate the effects of every societal dislocation. The passionate proponents of economic reform in the 1930's and of foreign aid in the postwar decade were able to argue that American democracy was in clear and mortal peril. Proponents of strong public action to bring about desegregation in the 1960's can cite highly serious injustices and threats to domestic tranquility as the justifications for intervention. Few defenders of city planning cite such serious or immediate crises. They say instead that planning is desirable to help minimize the pains of adaptation to change, and to develop cities in which everyone's opportunity for fulfillment will be enhanced. They generally fail, however, to confront certain obvious questions squarely. How, for example, should one

judge whether the alleviation of a specific social pain warrants the amount of growth in governmental power over the lives of individuals which it will require? Is it possible to achieve a high level of intelligent consensus about the substance of personal fulfillment, and the kinds of environment most conducive to it? The final judge of proposed answers to such questions must be the political process. And here is where planners' troubles have usually begun.

Political Restraints on the Goal Development Process

Speaking broadly, there are two ways to win political acceptance for new ideas in a stable democratic system. The first is to challenge the theoretical foundations of popular beliefs with which they conflict. This way is slow at best. Moreover, it requires a highly persuasive theory. Such theories are never easily come by, nor, if they challenge older persuasive theories, do they win acceptance quickly. In the United States, the other theories with which a throughgoing defense of comprehensive planning would have to contend are not even perceived as theories, but rather as part of the American tradition. Perhaps in consequence, American planners have generally eschewed full-scale defense of social planning, preferring to conciliate the powerful reasoning of American conservatism rather than to challenge it directly. The only theoretical defense of public planning which planners have frequently asserted has been based on a conception of planning as businesslike foresight. The simple theories required to defend this idea of planning have won fairly easy political acceptance, but they have not dealt with the inevitable political and social implications of serious efforts to plan generally or comprehensively. It has remained necessary, therefore, to deal with these implications *ad hoc* when such efforts have been made.

One way, then, to win political acceptance for new ideas is to challenge the theoretical foundations of older ideas with which they conflict. The other way is to adapt one's own arguments and objectives to the beliefs, attitudes, and political customs already prevalent. The latter way is more likely to yield immediate results, and it minimizes the risk that no results at all will be produced. American planners almost invariably have chosen it, no doubt in part because they are influenced even more by American culture than by international planning theory. It has certainly contributed to the political security of planners and the planning function. It has perhaps obscured, however, the problem of maintaining a clear professional viewpoint.

There is no need to search far for an explanation. It is extremely difficult for any agency whose explicit function is to propose new ideas to avoid coming into frequent conflict with established ways of thinking and doing things. Even if general strategy is articulated in the most conventional possible terms, this tactical dilemma is bound to remain. With respect to planning, it is bound to be most apparent when the planning is general and community goals must be determined. Given the importance of such a determination—if it is in fact to provide a guide for future public action—and the infinite varieties of emphasis possible, one would expect that the officials making it would run the risk of offending everyone. Even if they are oblivious of their own safety, the problem of winning political approval for their proposed goal statements remains.

Two methods of dealing with this problem at the level of general goals may be outlined.[11] The first is to state goals on which all reasonable men can agree. Unfortunately, goals of this type tend not to provide any basis for evaluating concrete alternatives. Thus, the St. Paul *Land Use Plan* stated as its most general goal the "evolution of St. Paul as a better place to live and work," and the *Plan* constantly justified its more specific proposals in terms of increasing "liveability." The second alternative is to propose somewhat more controversial goals in the expectation that the community's elective policy-makers will consider, if necessary amend, and ultimately approve them. Conceivably, planners might offer elected officials several choices of goals in each area of concern, though to the extent that they did so they would reduce the possibility of all the goals finally chosen being consistent with each other. Inconsistency might be turned to positive advantage, however. Part of using this approach successfully would be to deal in "packages," so that those in the minority when one goal was approved might hope to be in the majority when others were. The

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[11] It is dealt with generally at the level of means in Chap. VI.

objective, of course, would be to win all or almost all reasonable politicians to support of the package.

This method is tried frequently in the American system, but it seldom succeeds where the package is a set of general goals. Part of the reason, we have seen, is that many "reasonable" politicians in the system oppose general planning and the articulation of general goals on principle. Even more important is the fact that American politicians typically depend on public discussion to inform them of the interest and values affected by any proposal. If planners cannot spur adequate discussion of their goal statements, politicians cannot, and know they cannot, make informed choices among them. Even when discussion is achieved, the dictates of prudence and democratic ethics impel politicians to wait for consensus to form before acting. The upshot is that very few proposals emerge as law from American legislative processes until and unless the vast majority of articulate groups interested in them favors some version of them. In the case of novel proposals, virtual unanimity seems generally to be required unless the need for decision is seen by the vast majority to be inescapable.[12]

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[12] The phrases "vast majority" and "virtual unanimity" must be taken to mean proportions of those interested in each issue. Charles Merriam wrote thirty-five years ago in his classic description of Chicago politics that while virtually any group in the city could veto proposals affecting it, even the weakest group could get its proposals approved if no other group rose to object (*Chicago: A More Intimate View* [Chicago: University of Chicago Press, 1929]). Edward Banfield reports that Chicago's political system, run by the most powerful machine in the nation, operates still in roughly the same manner (*Political Influence* [New York: The Free Press of Glencoe, 1961]). According to Banfield, the "bosses" have few or no policy objectives of their own, and therefore decide issues in response to the electoral interests of their organization (i.e., the "machine"). They seem to accept the view that electoral benefits are probable only when what we have termed the "vast majority" and "virtual unanimity" rules are followed, and when ample time is given potential interests to recognize their concern and express it.

No political machines operated in either of the two cities I studied, but the professional politicians who ran each acted similarly to the Chicago "bosses" in committing their prestige and influence.

Some members of the planning profession have themselves publicly approved the politicians' instinct. The President of the American Institute of Planners wrote in 1955, for example, that at a minimum policies adopted by government should be acceptable on a voluntary basis to 80 or 90 per cent

In the national sphere, these "rules" may be waived when survival seems to be the stake. In most areas of urban life, however, people with money can escape the worst consequences of any change. Thus, Scott Greer has characterized the American city as one of "limited liability" from the viewpoint of the individual.[13] To illustrate: if a middle-class neighborhood becomes a slum, the original residents can move out, and though this has a price it is generally easier and cheaper than fighting the trend. So long as the general standard of living is rising, most of the newcomers are taking a step upward; they are likely to be apathetic toward efforts to resist the transition, and positively hostile to programs which might "improve" the neighborhood's prospects sufficiently to drive rents up. The immediate threats in urban life, then, are of individual dislocation rather than of societal survival, or even decline.

Politicians in American society occasionally alert their constituents to specific ills and dangers, and champion specific programs for dealing with them. It has recently become fashionable, moreover, for some politicians to conduct well-publicized quests for consensual, nonoperational general goals. It is a rare politician indeed, however, who leads his constituents in formulating positive operational social goals. The quest itself would be likely to stir antagonism among those who did not believe societies should have positive goals, and it would almost certainly stir new demands against the politician's limited resources. Moreover, those few citizens who long for positive planning rarely approach unanimity in any meaningful detail on what its substance should be. The obstacles to positive political leadership are such that even those who emphasize the potential educative role of the American Presidency usually admit that the President can be effective only so long as he confines his efforts to a very few widely perceived social ills and foreign dangers. The President who obtains authority to set up general planning agencies in moments of national crisis is likely, once the crisis begins to abate, to see them scuttled by Congress while he himself is charged with Caesarism. Consider the fate of the National Resources Planning Board, abolished by Congress in 1943 though its functions had been advisory only and it had carefully avoided direct confrontations with other agencies.[14] The incomparably more significant Office of War Mobilization and Reconversion achieved immense powers of coordination in the course of its brief life, but only during total war and at the expense of adopting a highly judicialized bottleneck—as opposed to policy-oriented comprehensive—planning approach.[15] The Bureau of the Budget has nurtured its far more limited influence similarly. Few chief executives at the local level have formal powers comparable to those of the President in his, and of course none have comparable prestige.[16] In general, the American distrust of executive power has found more forceful legal expression at the local level than at the national, perhaps because of the need for foreign and military policies nationally, and because opponents of executive power since the brief Federalist interregnum have found the constitution which it produced too difficult to change.

The opponents of planning have recognized the difference by focusing their attention on national rather than local planning efforts. Businessmen have been the primary patrons of the urban planning movement in America since its beginnings. As the planning movement has matured, moreover, fewer and fewer large property owners and executives have seen anything ironical about their providing the primary base of political support for local land-use planning while continuing bitterly to oppose anything remotely resembling national economic planning. The major reason

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of the public (John T. Howard, "The Planner in a Democratic Society—A Credo," *Journal of the American Institute of Planners*, XXI, No. 3 [Spring-Summer 1955], 62–65). If he meant, which I doubt he did, that it was all right for 10 or 20 per cent to be strongly opposed, he was a radical by the standards of most local politicians.

[13] *The Emerging City* (New York: The Free Press of Glencoe, 1962).

[14] See Edward H. Hobbs, *Behind the President* (Washington, D.C.: Public Affairs Press, 1954), Chap. 3; A. E. Holmans, *United States Fiscal Policy 1945–1959* (London: Oxford University Press, 1961), pp. 33–36; and Charles E. Merriam, "The National Resources Planning Board: A Chapter in American Planning Experience," *American Political Science Review*, XXXVIII, No. 6 (December 1944), 1075–1088.

[15] See Herman Somers, *Presidential Agency* (Cambridge: Harvard University Press, 1950), Chap. 2; and V. O. Key, Jr., "The Reconversion Phase of Demobilization," *American Political Science Review*, XXXVIII, No. 6 (December 1944), 1137–1153.

[16] Both of the Twin Cities had very "weak" mayors, even by local standards.

for the survival of this apparent inconsistency has probably been that leaders of property-oriented groups have lacked confidence that they could control planning at the federal level under the President. If this view is correct, the critics have spared local planning from their attacks just *because* local politicians have had insufficient power to defy the veto groups of their political system. This theme is elaborated in Chapter VII.

The Ideal of Middle-Range Planning

The point has been made in previous sections that truly comprehensive goals tend not to provide any basis for evaluating concrete alternatives. It is thus difficult to stir political interest in them and impossible to plan rationally in their service. Recognizing this, at least implicitly, many contemporary planners claim to practice middle-range planning—which they define as planning for the achievement of goals that are general, but still operational. It is not very fruitful to strive for greater definitional precision than this, because the image is one of balance between the contradictory ideals of comprehensiveness and specialization. Experienced planners have a "feel" for the conception, however, and explain it to neophytes by citing illustrations. For our purpose, the *Central Minneapolis Plan* may be cited as clearly falling in the "middle range."

The middle-range planning ideal has much to recommend it, despite its imprecision. It permits the promise of meaningful political discussion and approval of planning goals, even if the achievement may in practice be highly elusive. In addition, criticisms of comprehensive planning rooted in liberal democratic theory are much less forceful when applied to middle-range planning. From the viewpoint of the general planner, however, the middle-range planning ideal has one crucial flaw. It provides no basis for the planner to claim to understand the overall public interest. Men who plan to achieve operational—even though relatively general—goals are specialist, not comprehensive, planners. Consequently, they have no obvious theoretical basis for claiming to know better than other specialists how far each specialist goal should be pursued, and with what priority.

Specialization vs. *Comprehensiveness:* *The Uneasy Balance*

The case for efforts at genuinely comprehensive planning has generally rested heavily on the thought that planners can resolve conflicts among goals in expert fashion. If they cannot, if they can only articulate specialist goals, then elected officials would seem required to act as the comprehensive arbiters of conflict. If it is assumed that arbiters operate most successfully when all important considerations are presented vigorously to them, one might argue reasonably that each important cluster of operational goals should be defended by a separate agency. Philip Selznick, for instance, has contended that leaders who wish to maximize their influence should structure their organizations so that the lines of jurisdiction dividing subunits are those along which important issues are likely to arise. His reasoning is that if issues arise within subunits they are likely to be decided by the subunit head, without the chief executive becoming aware of them. It is when subunits themselves come into conflict that arbiters at the next higher level are most likely to learn of issues.[17] Delegation of overall authority to arbitrate, in this view, even within the framework of highly general goal statements, is bound to transfer the substance of power from the delegator to the delegatee. If the delegator retains appellate jurisdiction he may dilute this effect. The more that he is committed to uphold the comprehensive policy vision of the delegatee, however, the less he will be able to do so. In trying to persuade politicians to make this delegation and to commit themselves to comprehensive policy visions, defenders of comprehensive planning must contend that the politicians will further the welfare of their constituents by doing so. To the extent that planning agencies lack truly comprehensive perspectives, this contention becomes less and less plausible.

Beyond this, even in pursuit of their own specialist goals, planners operate in a world of whole objects, not of analytical aspects. They cannot conceive means that will further the operational goals of primary interest to them without affecting innumerable others in uncontrolled fashion. Sophisticated planners recognize this, and try not to serve their stated goals exclusively. The operational goal of the *Central Minneapolis Plan,* for example, was downtown economic growth. Its authors realized, however, that they could not reasonably ignore other goals. They wrote and spoke as though the cultural, political, spiritual, recreational, and other functions of downtown could never conflict with each other or with the economic function. In practice, they were saved by their common sense; they did not press their pursuit of economic goals sufficiently far to spur public awareness of potential serious conflicts. Conceivably, they might have listed all the significant operational goals they hoped to serve, but they would still have been left with the problem of balancing them. In short, every concrete object of planner attention is a miniature of the whole. The important analytical problems that arise in planning for an entire urban area arise in planning any section of it.[18] Perhaps the only escape is frankly to adopt a specialist orientation, even while remaining willing to adjust specific proposals as highly distasteful side-effects become apparent. It may still be plausible to maintain, however, that planners are custodians of values that somehow deserve to take precedence over the values propounded by other specialists. Let us consider the most persuasive lines of reasoning frequently advanced in support of this view.

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[17] Philip Selznick, *Leadership in Administration* (Evanston: Row, Peterson, and Company, 1957).

One of the simplest was stated by Allison Dunham in a well-known article several years ago.[19] He claimed to have found after a survey of the planning literature that planners almost invariably believed that, at the very least, they were the officials best qualified to evaluate site proposals for every kind of facility. They based their position on the premise that planners were experts in the impacts of land uses on each other. The argument, in other words, was not that planners were "wiser" than operating agency officials, but that on certain types of issues their specialty deserved first place in the pecking order of specialities.

Two queries come immediately to mind. First, are the impacts of uses on each other regularly more important in site decisions than the intended purposes of each use? Second, can locational problems be separated meaningfully from all other problems? For illustrative purposes, consider a central issue of the Ancker Hospital site controversy: how should the potential health benefits of a contiguous medical center be balanced against the traffic congestion it would produce? Was it possible to say in the abstract which variable deserved greater weight? Was traffic congestion more a locational problem than building the medical center? The proponents of the medical center, it will be recalled, said that it could come into being only if Ancker Hospital were built on the one available site adjacent to the city's two largest existing hospitals. The only way to argue that planners should normally be given the benefit of the doubt in disputes of this kind is to say, as Dunham did, that specialists think of the needs of their constituents, while planners think of the impact of specialist proposals on others. In this case, the constituents were sick people and hospital staff personnel, while the "others" included many of the same people, but in their other capacities—as drivers and investors, for instance. The key question is whether the "others" should have had any more presumptive right to prevail than the recognized constituents.[20]

Another objection to this definition of planner competence is that it provides only the haziest indication of the legitimate jurisdiction of planners and of government. Just what is a locational decision? It is hardly enough to say, as planners generally have, that locational decisions are those that have an impact on surrounding property or people. Almost anything I do to my property affects my neighbor in some way. For instance, if I rent out rooms in my one-family home, I have changed the use of my land and therefore made a locational decision, by a common planner definition. Should government therefore control everything, as it already controls my right to rent out rooms? Planners deny that it should, but they have rarely asked where the cutoff point should be. They have typically been satisfied to say that government should intervene only in cases of "substantial" harm, and that common sense will prevail in interpreting the word "substantial." They may be right, but this formulation gives the citizen no theoretical guidance as to whose common sense should prevail in cases of disagreement between other decision-makers and planners.

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[18] The more limited objects (e.g., neighborhoods instead of whole cities) do present somewhat different, if not lesser, problems to the comprehensive planner. Cause and effect are easier to trace on the small scene, and important differences of interest are likely to be fewer. On the other hand, if planners emphasize the common interest of each homogeneous unit, they may well accentuate the differences between units.

[19] "A Legal and Economic Basis for City Planning," *Columbia Law Review,*

[20] This distinction recalls John Dewey's definition of the public interest (in *The Public and Its Problems* [New York: Henry Holt and Co., 1927]) as the interest in a decision of all those not directly party to it. Critics have pointed out that the parties to the decision have some claim to be considered part of the public too, in most cases the most clearly affected part. Those who dispute over definitions of the public interest are not mere academic quibblers. The phrase "public interest" has inescapable normative, and therefore political, significance. Those whose interest is opposed to it by a proposed defini-

A second persuasive line of reasoning to support the view that planners should generally prevail in such disputes is that they alone among city officials spend their days analyzing city problems from an overall point of view. Operating agency officials cannot rise above their day-to-day administrative chores, and in any event their perspectives are conditioned by the narrow responsibilities of their departments. Even politicians typically devote most of their time to maintaining contacts with, and to performing errand boy services for, their constituents. In dealing with legislative proposals, they generally focus on details of immediate interest to vocal groups rather than on the overall picture. In most cities, moreover, councilmen are elected from wards; in many they work only part time at their jobs; and in some each councilman heads a city department. Only planners can devote all their time to thought about city problems at the most general level.

The most obvious criticism of this position is that freedom from operating responsibility may not be the best condition in which to make high-level decisions. Some prominent decision-makers have argued that it is a poor one. Winston Churchill, for example, has written that Stafford Cripps became restive and hypercritical of his colleagues while serving as parlimentary whip during World War II. What he needed, according to Churchill's diagnosis, was responsibility which would absorb his energies and give him a sense of the concrete issues. Those who are free from operating responsibility, concluded Churchill, tend to develop an unhelpful watchdog mentality. It is unhelpful because they usually think too abstractly to be cogent critics of complex choices among policies.[21] Similarly, Chester Barnard has written that study and reflectiveness without operating responsibility tend to lead to the treatment of things by aspects rather than wholes, to a disregard of factors which cannot be expressed precisely, and to an underestimation of the need for artistry in making concrete decisions. Because so many crucial factors cannot find expression in words, Barnard concluded, the interdependencies of social life can only be grasped intuitively. Only men of long and responsible experience are likely to acquire very much of this intuitive grasp, and therefore only such men—who will also grasp the supreme difficulty of planning in this "world of unknowns"—are qualified to plan.[22] This is unquestionably a rather mystical position, but for all that it is no less a respectable and forceful one.

Barnard and Churchill agree, then, that freedom from responsibility for operating decisions is anything but fit training for planning.[23] Those who accept their view are likely to believe that any one of a number of city officials may qualify better than the planning director to serve as the wise chief advisor of politicians on broad policy issues. The Minneapolis and St. Paul city councils consistently acted on this belief. To the extent that they desired coordination of public works, they normally relied on their city engineers to achieve it. When the Minneapolis City Council decided in 1953 to separate capital budgeting from ordinary budgeting, it set up a committee composed of politicians and civic leaders. The committee was given a small staff headed by a former city councilman. Planners were shut out of the capital budgeting process entirely. When the St. Paul City Council decided that it needed a special advisor on the interstate freeway program, it appointed City Engineer George Shepard, who had been about to retire. When Minneapolis City Engineer Hugo Erickson left the city government for private employ in the late 1950's, his successor proved inadequate (in the City Council's view) for the unofficial task of city public works coordinator. Within a year, the Council lured Erickson back into government, giving him the title of Development Coordinator. Minneapolis planners believed that they should have been given the job, but they could offer no strong arguments to support their view that Erickson was less able to take the overview than they. The politician most responsible for bringing Erickson back told me that the planners thought too abstractly and with insufficient regard to cost, whereas Erickson, though less articulate, understood the infinite, inexpressible complexity of governmental choice. In fairness to the planners, it should be added that Erickson had made his entire career in Minneapolis, looking to the City Council for his raises, perquisites, and promotions. He had risen primarily because of his technical competence, to be sure, but also because the councilmen felt confident that he would not embarrass them politically and that his overriding loyalty was to themselves. Planning Director Irvin, needless to say, could not claim similar qualifications. (Irvin's tactical dilemmas are discussed further in Chapter VII.)

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[21] *The Second World War,* Vol. IV: *The Hinge of Fate* (Boston: Houghton-Mifflin Co., 1950), p. 560.

Churchill was not arguing against the making of large decisions by generalists, of course. He himself was Prime Minister. Nor was he criticizing the British practice of concentrating authority within the civil service in the hands of generalists. Several points may be noted. The generalists in a British ministry exercise all formal power of decision not exercised by the minister himself. They bear responsibility as well for deciding which issues, and which specialist analyses of them, are important enough for the minister to consider. The elite corps of the generalists, the Administrative Class, are expected on entry only to think, write, and speak clearly, and to have done well in their subjects of undergraduate concentration. Any subject will do, although subjects fit for "gentlemen" (i.e., men devoted to culture rather than to making a living), notably the classics, have traditionally predominated. British administrators have no formal technical training for their work at all. They are platonic rather than functional leaders, but matured on responsibility rather than study. Those at the higher levels are notably unsympathetic to the ideal of general planning. They take well-known pride in deciding "each case on its merits."

Parenthetically, where city planners are employed in British ministries they are considered technicians, capable of contributing useful advice on specialized aspects of issues, but not of being entrusted with the power to make decisions.

[22] Chester Barnard, *Organization and Management* (Cambridge: Harvard University Press, 1948), Chap. 4.

[23] It should be clear that when I speak of "planning" in this chapter, I mean the work of determining overall policy guidelines for public activity, and means of implementing them. No single individual or agency makes such determinations alone in an American community. The recommendations of some, however, are bound to carry more weight than those of others. The crucial questions at issue here are (1) whether the views of planning agencies

A third defense that planners frequently make of their aspira-

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on controversial policy issues should normally be granted presumptive validity in the absence of strong evidence discrediting them; and (2) whether the training and career patterns of professional city planners equip them well for planning at the higher levels.

tion to be more than "mere" specialists is that governmental efficiency is served by having one agency keep track of everything that every city agency does, calling attention to conflicts and to means of coordinating effort for the benefit of all. The distinction between coordination and planning, however, is of practical importance only so long as planners have no power. Without power, they can as coordinators simply try to persuade groups of specialists that their respective interests will be served by improved coordination. As soon as planners begin to impose solutions or advise politicians to impose them, however, they have entered the substantive planning field. That is, they have set their perception of the public interest on substantive matters against those of the specialists who have rejected their advice. Similarly, when planners request authority to prepare a city's capital budget, they cannot justify the request on grounds of "simple efficiency," which would have to be established by the criteria of all the specialists' own goals. They must assert, at least implicitly, that they have some means of choosing among the values entrusted to each operating agency. In other words, they must claim to have goals. And the coordination of action in pursuit of substantive goals, is, if it is anything, substantive planning.

One might say that the planner needs coordinative power only because some specialists stupidly or obstinately refuse to cooperate with others in the interests of "simple efficiency," even though no significant values are threatened. The answer is that no one can determine that this is the case in any particular controversy without examining it in detail. Philip Selznick has illustrated this point clearly in his analysis of the history of the Communist party.[24] The party refused to cooperate with other leftist parties in the decade before the Popular Front, despite the obvious threat of fascism. Yet this period of isolation, Selznick contends, made the party a much more valuable tool to its masters during and after the Popular Front period. During the isolation period, the "character" of the party developed and became incorruptible. This extreme example illustrates a simple point: that cooperation and isolation in themselves have important effects on organizations. If an agency head claims that a measure advanced in the name of efficiency actually threatens important values—and any agency head who refuses the advice of the planning director will say this —no outsider can refute him until he examines the bases of his arguments in detail. If we assume that most agency heads are men of good conscience, we can likewise assume that they will have some reasons that seem genuinely sufficient to them, and that they will seem so as well to at least some reasonable outsiders. In the end, no act of coordination is without its effect on other values than efficiency.

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[24] *The Organizational Weapon* (Glencoe: The Free Press, 1960).

Some planners reading this chapter will no doubt judge that the issues raised in it are "ivory tower stuff," and in the immediate sense perhaps they are—though to me they appeared quite close to the surface in the Twin Cities. The purpose of this chapter, however, has been to challenge the planning profession to reinforce its most fundamental arsenal. In the long run, I suspect, general planning and evaluation will have little effect on American cities unless their goal premises can be established in sufficiently compelling fashion (both politically and intellectually) to make politicians take notice. I shall try to begin the task of reconstruction in the chapters which follow.

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EMERGING VIEWS OF PLANNING

Richard S. Bolan

City planners view the world of policymaking and public decisionmaking in a very particular way. Some critics, in fact, suggest that one reason planning is not as effective as it might be can be traced to this view. Until recently, city planners have felt that because the policymaker could not, or would not, adopt the planners' view, community decisionmaking represented something less than optimum rationality. There are signs, however, that city planners are changing their view, and there is some hope that in so doing they might become more effective.

A number of recent probes into the nature of the planning process suggest a new understanding of social movements, governmental processes, alternative "styles" of planning and, indeed, the very nature of cognitive processes and rationality. Robert Hoover's study of historical social movement and change,[1] John Friedmann's analysis of varying planning styles associated with comparative national political environments,[2] the host of community decisionmaking studies beginning with Floyd Hunter's study of Atlanta and including the classic study of public housing in Chicago by Meyerson and Banfield,[3] the "Symposium on Programming and the New Urban Planning" in a recent issue of the *AIP Journal,*[4] and other writings indicate a convergence of thought dominated by the theme which breaks down the classical, simplistic ideals which have been characteristic of city planning for half a century.

This essay is an effort to describe that convergence, with the basic purpose of indicating possible directions for a broader, more detailed conceptual framework for the planning process. It is hoped that the discussion will provoke and stimulate new thought and new research in a vein which can aid planners of all persuasions to come to grips with the complex and crucial process of managing urban change.

Two central questions seem to be paramount as the new viewpoints evolve. The first recognizes the wide disparity that exists between the planner's traditional notions of rationality and the actual social (or "political") processes by which policies are actually chosen, and asks what adaptations must be made in the method, strategy, or content of the planning process in order to yield more rational public policies within a democratic framework. The second question asks how the planner could deal more effectively with the elusive problems of goals and values. Unlike engineers or other professionals, the planner has no clearly circumscribed area of technical expertise which is universally recognized, and he finds himself constantly attempting to deal with value choices which clearly transcend technical judgment alone.

The Classical Model Under Attack

The salient features of the planner's view of the world of policymaking are:

1. The planning commission (with its professional staff) is an advisory body which assists government in formulating policy. Its view is comprehensive in that no aspect of community development is assumed to be beyond its responsibility. It is also comprehensive in the sense that the planning commission is the guardian of the *whole* public interest rather than any particular special interest.

2. From this, it is assumed that the planning commission is both capable and responsible for establishing long-term development goals which provide a broad perspective and give substance to short-term particularistic community decisions. Planning is construed to be the antithesis of nihilism and is thus responsible for developing the broadest and highest aspirations to give meaning and purpose to the community's day-to-day activities.

3. These long-term goals are expressed by a long-range comprehensive or master plan whose salient features include a map of what the pattern of land use development will be at some distant point in the future and some general policies as to how the community should be guided as it attempts to strive for that end-state.

4. With this, it is assumed that short-term, small-scale development decisions are to be measured against the yardstick of the master plan. The master plan would essentially eliminate debate on goals and on general means so that debate could focus on relatively narrow grounds of particular means.

This view has had its difficulties, and an added characteristic has been introduced. Planning is now viewed as a *process* (still largely undefined) and the master plan is a *flexible* guide to public policy. This came about because it was sometimes found desirable to change goals; predictions of the future did not always turn out to be accurate; and new values, new opportunities, and unforeseen side effects kept cropping up. These difficulties have never shaken the planners' faith that this is the ideal model (on the contrary, they provide a justification for doing a new master plan).

Reality, of course, has never measured up to the ideal. In small, homogeneous communities it sometimes comes close; but in large urban centers, master plans and the accompanying political features of the classical model have seldom served as the fountainhead of guidance for particular community decisions. Even worse, the ideal itself is beginning to be questioned in principle.

Banfield cites four reasons why he considers comprehensive master planning an impossible ideal: [5] an inability to predict the future much beyond five years at a time (if that), an inability to discover the goals of the community on which all can agree, the decentralized character of our political system, and a lack of knowledge of effective means to achieve ends. Friedmann [6] adds another: the notion of comprehensive planning serving the total public interest is incompatible with the narrow interests involved in the competition for power and influence which is characteristic of any political system. Mann [7] suggests that, given the character and composition of the decision-making process, the best that the planner can hope for is "problem solving" or "opportunity seizing." Altshuler [8] adds that, in reality, decisionmakers prefer operating at levels where comprehension and prediction are more certain "even if this means fragmenting policy choices rather than integrating them." Wingo [9] suggests the added difficulty that the comprehensive ideal overlooks the substantial human and social costs of achieving the desired goal. He adds that "such a logic implies that the payoff to the community is realized only as the sought-after environment emerges. . . . The critical policy question is not only how much the community is prepared to give up to realize the goals implicit in the master plan, but *who* gives up *how* much so that the fruits of the plan can be realized—*quite frequently by others.*" (Emphasis mine).

Finally, the most "comprehensive" attack on comprehensive planning is made by Braybrooke and Lindblom [10] largely on the grounds of the practical limits of rationality. As Banfield has done, Braybrooke and Lindblom question one's ability to determine goals or values, which, in any event, are always in a state of flux. They then go on to list the following as practical limits to comprehensive (or "synoptic") policy-making:

Man's limited problem-solving capabilities
The lack of truly comprehensive information
The costliness of comprehensive analysis
The inability to construct a satisfactory method for evaluating values or goals
The closeness of observed relationships between fact and value
The openness of systems of variables
The analyst's need for strategic sequences of analytical moves
The diverse forms in which policy problems arise.

Braybrooke and Lindblom further hold that decision-making is 1) incremental or tending toward relatively small changes, 2) remedial, in that decisions are made to move away from ills rather than toward goals, 3) serial, in that problems are not solved at one stroke but rather successively attacked, 4) exploratory, in that goals are continually being redefined or newly discovered, 5) fragmented or limited, in that problems are attacked by considering a limited number of alternatives rather than all possible alternatives, and 6) disjointed, in that there are many dispersed "decision-points."

Most critics do not suggest that planning be abandoned or that we relegate public issues to a fatalistic reliance on some "unseen hand," which will somehow help us "muddle through." The real question is, can, or should, the process of planning adapt to the difficulties that the critics have raised? If comprehensive planning is difficult either in principle or in practical terms, are there reasonable alternative approaches which can be effective? Both the proponents of comprehensive planning and its critics have polarized themselves into discussing the extremes. Granted that the world can never be as the comprehensive planner dreams it to be, neither is it so totally incremental as Lindblom suggests. What is suggested is that there are many possible positions between these extremes, and that planning needs to respond in a manner carefully calculated to be appropriate to circumstances.

The Environment for Decision

As a part of examining these possibilities in more systematic fashion, it is important to review briefly the public environment of American community life in which the planning process is attempting to function.

HISTORICAL ENVIRONMENTAL FACTORS

American communities possess attributes which are a function of place, historical development, economic rationale, and social composition. The fact that the Irish settled in Boston and the Germans in Milwaukee implies two quite different social and political environments in these two cities, and the kind of planning process which may work well in one may not work well in the other. Similarly, the fact that Miami finds its economy based on tourism and Cleveland on manufacturing has its implications for their planning processes. These different environments give rise to variations in the kinds of interest groups which evolve and the differences in social and political strength found among similar interest groups.

Size and stage of development similarly have their impact on the planning process. Generally speaking, the larger and more mature urban communities possess greater diversity in social and economic structure, leading to greater diversity in public and private goals and a broader spectrum of political interest. The mature urban area undergoing a period of stabilization and decline is also likely to be more conservative and more tolerant of built-in diseconomies and inefficiencies. On the other hand, the young, rapidly growing area is more receptive to change and risk-taking.

Stability and uncertainty themselves have an impact on the planning process. Rapid turnover of political leadership, frequent crises, boom-and-bust economic conditions, and racial and ethnic conflict produce conditions which are most difficult for classical long-range planning, or at least drastically different for it than those in communities that experience stable leadership and near social and economic equilibrium.

These statements are almost trivial. Most responsible planners have intuitively recognized these differences in communities, and most of them instinctively realize that these differences have ramifications for the planning process. The important point is that most planners, in accounting for these differences, have not thought through alternative planning strategies or "styles." Instead they have tried to develop alternative ways of selling comprehensive or "master" planning.[11] Planning method has not adjusted and adapted to circumstances; instead the ways of imposing the classical ideal have been altered. Accompanying this is the usual wishful thinking that some day, given enough time and education, circumstances will change and the classical ideal will come into its own—even though more careful examination could reveal that the classical ideal might never be appropriate to present or future circumstances.

FACTORS IN THE DECISONMAKING ENVIRONMENT

The decisionmaking environment has been the focus of considerable attention during the last few years. A host of case studies have been completed, which have essentially sought answers to the questions: how are public decisions made, who makes them, who influences them, what goals (if any) are being sought, what kinds of information inputs are most critical, and what political, social, and economic obstacles have to be overcome? The authors of each case study characteristically attempt to generalize and develop some kind of conceptual framework which might yield greater insight and understanding of public decisionmaking. Not unexpectedly, this yields as many theoretical constructs as there are case studies. Some general characteristics are evident, however.

The most consistent notion running through the case studies is the "structure of influence" concept. This ranges from Floyd Hunter's [12] initial idea of a "power elite" to Robert Dahl's [13] more sophisticated notion of many dispersed, multicentered "elites." Perhaps more useful, and more fundamental, is Banfield's [14] description of the structure of influence, which is comprised of the *formal* structure (the collection of agencies and institutions of any community, their expressed goals, and the legal framework which circumscribes their activities and responsibilities) and the *informal* structure of influence (or the behavior of individuals within the formal structure and the actions they take in order that the elaborate checks and balances of formal decentralization can be overcome by informal centralization). He suggests that there "are hundreds, perhaps thousands, of bodies, each of which has a measure of legal authority and none of which has enough of it to carry out a course of action which other bodies oppose . . . therefore every opponent's terms must always be met if there is to be action."

Banfield's Chicago studies lead him to suggest the most important mechanism for doing this is the political party or machine. The Syracuse studies also tend to support this conclusion.[15] Many other communities, however, lack a machine and, in fact, proudly proclaim nonpartisan local politics. Thus, what might be accomplished through party machinery in Chicago would have to be accomplished in quite different ways in a nonpartisan city. Moreover, there are hundreds of variations in between. New York and Cincinnati, which have more than two local parties, suggest even more complex processes (although the latter is somewhat simplified by virtue of commitment to a strong city manager).[16] In cities like Boston and Los Angeles, each elected official tends to have his own private "machine," so that in these cities Banfield's "most important mechanism" is as fully dispersed as the formal structure.[17]

Thus, from city to city the structure of influence is highly varied. Yet, as all the case studies show, this structure is extremely important to planning proposals, whether such proposals involve area-wide plans (such as the Chicago Plan Commission's CBD Plan or the St. Paul land use plan) or particularized proposals (such as the sewage disposal plant for Syracuse). To think a single mold of planning method or planning idealism can be imposed in such diverse circumstances is suggested as naive, at best.

Other factors in the decisionmaking environment have their effects on planning. Friedmann [18] has suggested that measures of bureaucratic status and professional competency are of crucial importance. The anti-bureaucratic habits of the New England town can be contrasted with the pro-bureaucratic tendencies found in Washington, D.C., or the strong commitment to professional managers in the midwest. Clearly, these present quite different environments for planning. In addition, Friedmann suggests that variations in the efficiency of relevant information systems will affect the style or character of planning activities. Finally, all of the case studies exhibit the importance of private interest groups influencing public decisions. Business, labor, neighborhood associations, minority groups, civic associations all leave their mark in greater or lesser degree. As suggested earlier, such groups are strongly influenced by historical development of the community and prevailing social and economic character. Their behavior is also influenced by the skill and character of their leadership, the degree to which any given proposal threatens or enriches them, and the internal character of decisionmaking within an individual organization or institution.[19]

FACTORS IN THE DYNAMICS OF DECISIONMAKING

Rounding out the description of the environment for planning are factors which deal with the dynamics involved in reaching decisions. Broadly speaking, these include the characteristics of the people involved in making decisions, the techniques of debate and negotiation that they use, and the methods of transmitting influence.

In speaking of the characteristics of the people involved in making decisions, what is implied is their zeal, energy and skill, their relative bargaining power based on past participation in public debate, and their self-interest and status perceptions. All of these not only have a bearing on how decisions will be made but also on who will make them. These factors can be seen to have been quite strong in the various case studies where actors playing key roles in some public decisions were almost totally absent in others, and actors capable of exerting considerable leverage in some decisions are largely ineffectual in their participation in others.

Technique of debate and negotiation are also important, not only in terms of the skill and substantive content involved but also in terms of the manner in which nonobjective criteria are handled. In virtually every public issue there are value choices which transcend objective analysis, and, indeed, objective measurement. These value choices are often more crucial to the debate than formal logic and the degree to which any actor can highlight or obscure these value choices (depending on his purposes) will tend to be extremely instrumental in the final outcomes of decisions.[20] Similarly, skill in bargaining is a very important dynamic ingredient in the process: that is, the ability to create and effectively use exchange processes, compromise, and shared interests necessary in settling an issue.

The Nature of the Public Agenda

THE ATTRIBUTES OF DECISIONS TO BE MADE

Often overlooked by both planners and the case study investigators is the character of decisions facing a community. This is crucial to the planner and more than once frustrations have arisen through failure to recognize this.

Of major importance in any proposal is the degree to which it can be argued on ideological grounds. A decision to construct a playground, for example, is a relatively simple one because at this point in the history of most American cities there is little ground for argument in fundamental values. Recreation is a traditional public responsibility and playgrounds are a generally valued public good, which threaten no major structural alterations in the community. Public housing, on the other hand, is still being fought in many communities on the battleground of government intervention in a traditional private domain. Much of the recent protest against urban renewal relies on similar argument. Under these conditions, simulation models, cost-benefit analyses, and the planner's traditional land use studies are introduced to no avail. Settlements of such issues are more often based on peremptory rules based on long-standing value concepts.

Also of major importance is the scope of any given proposal. This relates to its distributive properties or, in short, how many people benefit and how many are threatened. Clearly, urban renewal for an entire neighborhood is a quite different public debate than a proposed "pilot" project on a single block; a proposed metropolitan open space system is argued quite differently than a proposed tot-lot. Generally speaking, the broader the scope of any given proposal, in terms of how many are affected, the more difficult it is to reach a decision and the greater likelihood of substantial compromise, or even stalemate, exists.

In similar fashion, the time horizon and flexibility of any given proposal has an impact on the character of decisionmaking. Proposals which promise to be permanent fixtures of long life allowing little or no flexibility over time are likely to stir more heated debate than improvements or programs which are not expected to last long or can be easily altered or modified over time. Construction of an expressway or a rail rapid transit line comes under the first category. The introduction of an innovation in an education program is an example of the latter.

Other factors in the character of decisions to be made lie in the complexity of organization necessary to carry out proposals and the confidence one might have in the anticipated consequences actually coming to pass. It is extremely difficult to reach agreement on proposals which require cooperation and coordination among many agencies. A latent goal of any agency is its own maintenance —a goal which may be seriously threatened in the political environment by cooperation with other agencies. Any such arrangement has built-in questions of who leads and who follows and whose interests are dominant or subsidiary. Similarly, proposals whose consequences are highly uncertain are extremely difficult to resolve, and the intrinsic conservative tendencies of decisionmakers will likely whittle down such proposals so that the best one might hope for would be small-scale "pilot" efforts where greater confidence in outcomes might be felt.

GENERATING FORCES BEHIND PUBLIC ISSUES

The decision system of urban communities does not function of its own accord. Particular issues have to be fed in, and the way in which this occurs is extremely important. Generally two kinds of forces set the system in motion, both largely initiated by the maintenance and enhancement needs of organizations, institutions, groups, and individuals.[21]

The first of these sets of forces are viewed as those emerging from the general community (or beyond). Such forces arise from notions of general social movements as people strive for a better life, more even distribution of resources, or for individuality in an increasingly technology-oriented society. Post-war suburbanization has been just such a movement. Today civil rights is a key social force in the public decisions of most U.S. urban areas. Another movement evident in contemporary society is based on general anti-establishment notions, represented by Levin's "alienated voter,"[22] Many of today's successful politicians are winning office by appealing to this movement with promises of "little city halls" in local neighborhoods.[23]

These broad social forces are an essential part of determining the value system of the public at large and they force themselves into the formalized day-to-day decisionmaking and planning systems whether those who regularly participate in those systems wish them to or not. Many years of frustration and apparent apathy may precede this, but once such movements gain headway they are extremely difficult to stop, and may sweep over a community or a nation. For example, the intellectual urbanist's vain exhortations about the evils of suburbanization have never slowed that movement down for a moment.

The second set of forces are those characteristic of regular or frequent participants in the decisionmaking process: elected officials, appointed officials, professional staff, organized interest groups, institutions, and various "elite" groups. The driving forces here are the general individual motivations of competition, success, recognition, influence, and "rising to the top." Perhaps one of the most useful concepts in considering these forces is Norton Long's "ecology of games":

> Within each game there is a well established set of goals whose achievement indicates success or failure for the participants, a set of socialized roles making participant behavior highly predictable, a set of strategies and tactics handed down through experience and occasionally subject to improvement and change, an elite public whose approbation is appreciated, and, finally, a general public which has some appreciation for the standing of the players. Within the game the players can be rational in the varying degrees that the structure permits. At the very least they know how to behave, and they know the score.[24]

Participants in Long's various games are in a continual state of warding off threats to their position or attempting to better their position. In each instance there are varying degrees of concern for abstract notions of an overall public interest. Each is primarily motivated, however, by narrow or special interests either held individually or shared by members of a group or organization.

In general these two forces provide the origins of public issues. In part, they stem from perceived problems and, as suggested by Braybrooke and Lindblom, seek remedial solutions for these problems. But contrary to what Braybrooke and Lindblom suggest, they may also stem from desires for enhancement of position, status, or wealth, and consequently may have little to do with ills or problems.[25] Finally, of course, many public issues combine seeking remedies with achieving enhancement goals.

These distinctions in the origins of public issues are important because they can have a significant influence on the decisionmaking environment. A social movement seeking redress (such as the civil rights movement) enters into the system and is handled within it in quite different ways from the enhancement symbol of a special interest group (such as the promotion of a convention center by a chamber of commerce.)

Alternative Variations in a Planning System

In raising the question as to how the planning process functions in the decisionmaking environment previously observed, Banfield states the dilemma incisively:

> Chicagoans, like other Americans, want their city's policies to be comprehensive and consistent. But they also want to exercise influence in making and carrying out these policies; they want to be able to force the government to bargain with them when its policy threatens particular interests of theirs. It will be a long time, probably, before they will be willing to sacrifice as much of the second end as would be necessary to achieve the first. *The tension between the nature of the system and the requirements of planning is, for all practical purposes, ineradicable.* (Italics mine.)[26]

Banfield goes on to make a fundamental distinction between what he calls "central decision" and "social choice." The former may be likened to the kinds of decisions which might be made within the staff of a planning agency or by a mayor's "cabinet." They attempt to follow logical, controlled processes of analysis, development of alternatives, and evaluation of consequences. The latter "is the accidental by-product of the action of two or more actors . . . who have no common intention and who make their selections competitively or without regard to each other . . . but, it is an outcome which no one has planned as a 'solution' to a 'problem.' It is a 'resultant' rather than a 'solution.' "[27]

It is the wide gap between "central decisions" and "social choice" which frustrates and thwarts the efforts of the professional planner. The "tension" between the two may be "ineradicable" but substantial evidence suggests that planners are making a wide variety of efforts to accommodate it. And these efforts seem to lie in the direction of developing alternative "styles" of planning which attempt to take more explicit account of the processes of social choice than does the classical ideal. Four components of planning "style" are suggested here as salient in describing this search for valid linkages: 1) variations in planning strategy, 2) variations in planning method, 3) variations in planning content, and 4) variations in planning organization.

VARIATIONS IN PLANNING STRATEGY

Strategy is viewed here as the means by which the planner attempts to persuade government officials and others that governmental policies and plans ought to be influenced by the information, criteria, and values which he (the planner) is specifically able to bring to bear.

Two extremes might be considered. The first would be a strategy aimed at compulsion or regulation wherein the planner would seek to get laws passed which require that government officials and others must take the planners' data, criteria, and standards into account in the course of their decision-making (such as mandatory referral laws and compulsory capital budgeting). The other extreme would be that of attempting to inject a planning system into the policymaking process by voluntary, "incentive" means. In short, the planner would seek to make it appear more profitable for government officials, community leaders, and voters to voluntarily submit to or be influenced by what the planner offers.

The first extreme is unlikely to be found to any effective degree in American cities (not for want of trying, however). Planners and planning agencies have seldom been able to develop sufficient political strength to create a truly compulsory situation (except for nominal and innocuous laws such as mandatory referrals which only give the planner the right to see and comment on proposals but not initiate, veto, or alter them). Thus, the planner is usually forced to seek the means to persuade government officials that it is to their benefit to listen to him and follow his advice. Some of the ways which he might do this are suggested here.

a. *Probabilistic Programming (or the "Politics of Information")*

Melvin Webber, in a recent *Journal* article,[28] provided full and explicit recognition of the dilemma facing planners. As a result he postulated what he termed as an "interim" strategy "until some resolutions of the inconsistencies within planning theory can be found." He describes this strategy as follows:

> It is the tactic of programming, as alternative to program-making or plan-making. *It calls for the installation of decision-aiding processes* that might never yield a formal program for even middle-run actions. Rather it would support the incremental, multicentered processes of deciding and acting; *but it would expand the probabilities* that these decisions and actions *would be taken more rationally.* (italics mine) [29]

His strategy is intended to take explicit recognition of the limitations on man's cognitive capacities cited by Braybrooke and Lindblom earlier in this paper. His fundamental tactic in this strategy is the installation of new urban information systems designed to be injected into the processes of social choice so that those participating are armed with better knowledge, more facts, and hopefully slightly better predictions. If they still act irrationally (as in the planners' eyes they doubtless will), they are at least better aware of their irrationality and its consequences.

This strategy has not been without some success. As Webber points out: "To inform a shopping center investor about consumer travel behavior and . . . market potential is to shape his decisions about shopping center locations and tenant mix." [30] Experience suggests that such information does indeed influence those who take the trouble to acquaint themselves with the facts which planners have assembled. Wholly unperceived opportunities often become exposed in this process.

However, while Webber expresses faith that the strategy would expand the *probabilities* of more rational decisions, it really only expands the *possibilities.* Again there is the inherent difficulty in assuming that more facts, more knowledge, and more certain predictions lead to a more rational process of social choice. Webber also points out that the installation of such decision-aiding processes is difficult and costly. One wonders immediately, then, if the benefits will be commensurate with the cost, especially in view of the fact that the benefits are recognized as uncertain at the outset.

Webber's strategy might be viewed as an up-to-date version of Meyerson's "middle-range bridge." [31] The computer has given the strategy tremendous new power. But in the final analysis the effectiveness of "middle-range" functions is entirely dependent on whether the planner is a meaningful participant in the political environment involved in patching together "social choices." The door to this participation is not open to him simply because he is armed with exhaustive and elaborate data files. The "politics of information" arises not from any intrinsic character or value of information, as such, but rather in *who* uses it and *how* it is used.

b. *The Informal Coordinator-Catalyst*

Another strategy for the planning process is for the planner to place himself squarely in the cross-fire of conflict in public issues. Armed with his particular type of methodological skills, he would attempt to be so positioned as to be able to scan the entire range of private interests and with rational and objective criteria, directly involve himself with working out the compromises and other bases for settlement of issues. From the planner's point of view this would insure that the results of the social choice process have a higher degree of technical validity.

This strategy is frequently recommended for a metropolitan planning agency which usually has no formal governmental base of operation but rather sits in a "limbo" between different levels of government—financially supported by everyone but responsible to no one. The main difficulty with the strategy is obtaining the acquiescence of the other participants in the process to permit the planner to play this role. It is most likely to occur on a metropolitan issue which cuts across both functional and territorial jurisdictions and where a real leadership vacuum exists (or, more specifically, in those issues in which stalemate is publicly intolerable but where the political environment is nonetheless likely to produce stalemate, such as the sewage disposal system in Syracuse).

Unfortunately, the planner aspiring to this strategy is on delicate ground. For this role is exactly what the American voter expects of his *elected* officials. If his elected officials claim that the checks and balances of the system are an impediment, the American voter has shown some signs in the recent past of a willingness to remove such impediments by permitting increasing degrees of centralized authority and responsibility. Given a choice between a party machine or a strong executive, invariably the latter is chosen as witnessed by the professional manager movement in the earlier part of this century and the trend toward strong mayor governments in more recent years. Clearly, the planner employed by a strong mayor can follow this strategy only insofar as his employer permits and is benefited by it. Even for the metropolitan planning agency, choice of this strategy depends very much on the structure of influence, the relationships between municipal, county, and state governments, the degree of dominance of the central city, and the mechanics by which metropolitan issues have been traditionally handled.

c. *The Disjointed Incrementalist*

This is the strategy of Braybrooke and Lindblom.[32] It is based on what is purported to be the empirical character of policy-making and asserts that strategy which conforms to this character is more likely to be effective than traditional notions of "synoptic" (or comprehensive) idealism, which the authors maintain is impossible to attain anyhow. These so-called empirical characteristics were listed earlier in the paper. Their implications when thought of as a strategy for planning would follow somewhat along these lines.

The planner would not attempt comprehensiveness (since he is unable to achieve it), but would rather work with segmental and incremental policy problems as these problems arise. His analysis would always be partial, focusing on the particular aspects of the problem at hand without placing too much stock in vague, hard-to-measure externalities or spill-over effects. He would recognize that any actions or programs stemming from his analysis would be experimental and the problem at issue would be successively attacked over time so that his current concern should be less toward ultimate solutions and more toward immediate (albeit partial) remedies. He would not attempt to define or articulate goals which his community should be moving toward, but would rather describe the ills currently present in the community and how they might be remedied. As a corollary, he would not attempt to devise means of achieving particular ends but would instead select ends appropriate to available (or possibly available) means. He would not attempt to analyze or even identify all possible alternative solutions to a problem (since he probably could not do this in any event) nor would he be much concerned with "system" effects which might arise from particular decisions. Finally, he would recognize that many other decision centers are concerned with the same issue and will be preparing their own analyses. The planner would, therefore, focus on the particular areas in which he has particular expertise.

There is a certain pragmatic attractiveness to this strategy (and, if Braybrooke and Lindblom are right, we are already behaving this way anyhow). It is true that certain purists would argue that Braybrooke and Lindblom make the same mistake as Kinsey; the fact that people do not behave according to an ideal does not necessarily mean that the ideal is wrong. Empiricists also argue that very little actual evidence was presented by Braybrooke and Lindblom, and that counter evidence does exist to suggest that governments and institutions have indeed made decisions which are not incremental, remedial, or serial. As Webber points out: "The success of the British town planners in changing the rules of city-building in England, and the success of the Puerto Rican planners in helping to transform an agrarian society to industrial status in less than a generation, suggest that even though planned parametric change may be uncommon, it is nonetheless possible."[33]

The strategy under some circumstances may be as effective as its authors claim. There are serious risks to be taken into account, however. It is very often the potential externalities, spill-over, and side effects of policy decisions which are most crucial and if the analyst does not anticipate them, Banfield's process of "social choice" will surely expose them for they are the very "stuff" of political controversy. If only the primary benefits and costs of a given proposal were to result, there frequently would be very little to argue about. Moreover, as was pointed out earlier, while unwilling to pay the full price, the American voter at least wants his public officials to *appear* to be comprehensive and consistent. The Braybrooke-Lindblom strategy thus carries with it high political risks.

d. *Advocacy and Plural Planning*

In a recent paper, Davidoff spelled out the case for what he called advocacy planning.[34] His approach to this strategy stems from the perpetual tension within the professional between personal convictions and the supposedly value-free objectivity of professional practice. Davidoff concludes (probably correctly) that these can never be separated and agrees with Banfield that very few, if any, public issues are wholly free of value choice to be settled on objective technical grounds alone. He complains that alternative plans have always been prepared on technical grounds so that they were never really valid alternatives at all. He holds "that there is or should be a Republican and Democratic way of viewing city development; that there should be conservative and liberal plans; plans to support the private market and plans to support greater government control."[35]
He further suggests that the executive and the legislative branches of government should each have their own planners. He goes on to suggest that special interest groups should have their own plans and planners. Frieden, in a companion article, cites the evidence that this is already occurring in neighborhood associations and in poverty programs: "Professionals in several different fields are currently attempting a new approach for assisting groups of people, usually on a neighborhood basis, in their dealings with local officials. A handful of urban planners, social workers and lawyers have been working directly for neighborhood groups rather than the city-wide agencies."[36]

Two considerations seem to be dominant in Frieden's comment. The first is an effort to restore the integrity of suboptimization to those who in the past have shouldered the burdens or costs of city-wide or system-wide optimization. The second is to give this same group an effective and skillful voice in public decision-making, where they had no voice before.

The implications of this as a planning strategy are not entirely clear. The planner distinctly abandons the pretense that he serves the whole public interest. To some degree the environment for decision-making is altered but only in that new participants with new skill in protecting their interests are added. However, Banfield's notion that public decisionmaking is a "resultant" rather than a "planned solution" is not substantially affected in spite of the fact that many more planners are putting their oar into the process. There is no guarantee that a neighborhood association will get just the kind of program and public policies they want simply because they have a planner in their camp. Moreover, at the city-wide level, it is not certain if there were Republican and Democratic teams of planners (or executive and legislative teams) that this would in any way develop different, "better," or more rational decision-making. One might anticipate, in fact, that it would add to the number of incommensurables to be pondered and make the decision process even more difficult.

On a practical note, how one mobilizes the professional and financial resources to implement this strategy can be a serious question, especially if individual planners find better salaries and safer havens inside city hall.

e. *Adaptive and Contingency Planning*

John Friedmann, in a recent *AIP Journal* article, makes a distinction between "developmental" and "adaptive" planning.[37] In his words: "The former is concerned with achieving a high rate of cumulative-investment for a given area by activating unused resource capabilities; the latter is interested chiefly in qualitative adaptations to the changing interplay of economic forces within the area. To put it another way, adaptive planning generally takes place in response to externally induced development." He goes on to say, "Adaptive planning attempts merely to relieve temporary crises in housing, education, local transportation, municipal water supply, or outdoor recreation which may be caused by . . . exogenous changes." He argues that given contemporary characteristics of regional development, the character of current economic decisionmaking, and the high degree of interregional interdependency, the planner of a city, municipality, and perhaps even a metropolis, can only, with any realism, perform adaptive planning. He can only respond to exogenous forces, take advantage of exogenously developed resource capabilities (such as a new federal program), and attempt to create the proper response to pressures created by those forces and opportunities.

Such planning may be less than comprehensive since the planner is principally concerned with foreseeable "temporary crises." Also it need not be purposeful planning—it is simply responding to external stimuli. It would not be wholly reflex action, however, since the planner would presumably be guided by some standards and criteria as to how the community *ought* to react. Thus adaptive planning does not fully answer the dilemma posed by the gap between the political system and the planning system since it, too, eventually has to come to grips with normative values.

Adaptive planning has many advantages, however, and can be a useful approach to the planner's dilemma. Planning is immediately focused on the critical predictions and their likely consequences, and it pays attention primarily to those public actions specifically responsive to those predictions. It is, in effect, "problem-solving" or remedial planning in the sense of Braybrooke and Lindblom except that it is focused on ills (or "temporary crises") which may exist in the future as well as those already existing. It can be a quite simplistic approach understandable to all since the likelihood of future crises is strongly based on past experience and fairly simple cause and effect chains of reasoning. It is not, for example, difficult for anyone to envision that if a community's population grows, its need for school buildings will grow in some related proportion.

A corollary strategy might be termed "contingency planning," of which the most universal example is the purchase of life insurance. It is, in effect, that approach which is aimed at creating conditions whereby the effects of contingencies or unforeseen crises can be deflected or absorbed at minimum cost or inconvenience. Much of civil engineering has this focus wherein large safety factors are introduced into designs to reduce to a tolerable minimum the likelihood of failure. Occasionally the engineer even offers a cost-reliability tradeoff, such as in a drainage system which can be designed to accommodate a storm whose likely frequency is once every ten years or, alternatively, can be designed to accommodate a storm whose probability is only once every hundred years.

Where contingency planning deals with *probabilities* based on previously observed experience, it seems to work quite well. The trade-offs are explicit and costs and benefits can be reasonably calculated. Optimization techniques are becoming well known.[38] On the other hand, contingency planning which deals only in *possibilities* does not seem to fare so well. The outstanding example of this is civil defense planning.

More fundamentally, however, contingency planning shares with adaptive planning a basic problem—it seeks to avoid the worst with no guidance as to how to achieve the best. Again, however, this may be all that is possible —not because (as Friedmann implies) the local puppet must dance to the national or regional piper (even if this were true) but rather because at any level no two people fully agree as to what "the best" is that should be sought. These two closely related forms of planning, then, are very much akin to "disjointed incrementalism," with the main distinction being that they focus on reasonably likely future crises rather than only present ills.

VARIATIONS IN PLANNING METHOD

The planning method, or scheme of logic, is also subject to varying degrees of choice. It might range from various forms of partial or limited analysis to the broadest efforts at comprehensive vision where all interdependencies might be accounted for and all disparate elements integrated into a meaningful whole. It might be highly mathematical and quantitative, seeking to express order in precise and dimensionally consistent terms; or it may be utopian and qualitative, seeking order through the subjective qualities of beauty or social harmony. It might be bold and far-seeing or hesitant and experimental. It might focus on processes or end-states; achievement goals or performance standards.

The choice of planning method is independent of planning strategy yet it is affected by it. Certain strategies could involve the use of almost any method while others might be appropriate only in conjunction with a specific method. For example, the "coordinator-catalyst" strategy could involve virtually any planning method and the selection would be guided by other factors in the planning or decision system. On the other hand, the "disjointed incrementalist," by nature, would shun comprehensive methods favoring partial or fragmentary schemes of logic. Similarly, the advocate planner, oriented to the ends of a particular interest group, would select a planning method consistent with those limited ends.

Four alternative methods are described here to illustrate their variability. They range from efforts at global optimization of a single welfare function to suboptimization among disparate value systems. They traverse the scale from comprehensiveness to reasoned selectivity to sheer opportunism. Other schemes of logic can be described but these listed below are typical, in current use, and well serve to illustrate the variability possible.

a. *Systems Analysis and Simulation*

The planning profession currently finds it fashionable to engage in mathematical model-building and systems analysis.[39] The focus is on "planning" models as opposed to purely predictive devices since what is sought is an instrument for more thoroughly exploring the consequences of alternative public and private actions. Such models attempt to build in "systems" effects in order that an action taken regarding, say, the transportation system can be analyzed in terms of its effects on the land system and social or economic distributions. Beginning to be of important concern in the development of these models are techniques which can also analyze alternative time-space sequences of public and private action. In addition, efforts to build in the costs and benefits of public actions are underway.

These efforts clearly reflect a desire for more refined and more varied comprehensive techniques. Because these models are dependent on the use of the computer, they also are highly flexible and can theoretically evaluate many more alternatives and can provide information about short-run, as well as long-range, effects. Thus, the desires of interest groups, both individually and collectively, can presumably be plugged into the model and very rapid predictions of their immediate and future consequences and their impacts on other systems can be explicitly determined. In short, the models should enable the decisionmakers to be much more explicit about the varying effects of the social choice processes (with no guarantee the resultant decisions will be any "better" or "worse" than they have been in the past).

In the final analysis, however, this is clearly comprehensive planning dressed up in fancier garb. It has an important place in the diverse professional interests of planners if only to add to the still meager stock of knowledge about how cities function. It does little about overcoming the tension described by Banfield between the political system and the requirements of comprehensive planning. This alternative, in fact, makes far more exacting the requirements of planning and continues in the blind faith that more elegant and more elaborate analytical techniques are the answer to bringing together the political system and the planning system.

b. *Cost Effectiveness and Program Planning*

Management techniques recently enunciated by the Rand Corporation and applied with outstanding success in the Department of Defense[40] have inspired many planners to consider their application to urban problems. In part, the efforts at developing mathematical models and "systems" analysis described above stem from this example. Some of the Community Renewal Program efforts currently underway attempt to carry it even further. Essentially all public activities in the urban area are broken into individual program "elements." From this a 5- or 6-year program, force structure and budget are developed after explicit objectives of each program element have been identified. The program and budget for a given element evolve from a systematic analysis of alternatives and their likely consequences. Individual programs thus optimized are then analyzed collectively and optimization takes place at successively higher levels with continual analysis of alternative cost-benefit relationships and effective trade-offs between program elements are developed. Feedback is presumed to be built into the system wherein expectation and actual performance are evaluated.

This approach to planning differs from comprehensive planning only slightly and many of the same conceptual problems persist. It does require a more intensive focus on the relationships between means, ends, and resources. It puts a heavy stress on suboptimization of individual functional systems as an essential part of achieving broader optimization; a stress which is quite different from that of traditional comprehensive planning which purportedly strives primarily for overall territorial optimization. It does not, however, materially contribute to bridging the gap between central decisionmaking and social choice. On the contrary, it relies heavily on centralization of authority and its success in the Department of Defense goes hand-in-hand with the Department Secretary's parallel success of creating one of the most centralized government agencies in the nation's history.

c. *Quasi-Keynesian Planning*

The present crop of national economic planners now lay claim to having developed the techniques to "manage" the economy. Such management is based on Keynsian notions of strategic and selective control of certain key levers in a basically private economy, and the results of such control have yielded an unprecedented period of national prosperity. Not without envy, some planners suggest that in order to "manage" our cities better, comprehensive planning should give way to more selective effort to regulate and control certain key features in the environment. Doebele[41] has suggested the planner strive to establish "the control positions or leverage points from which . . . [the planner] might exercise an influence over the development of the metropolitan region far greater than . . . resources would seem to make possible." His list of key levers includes control over accessibility (highways and public transit), basic utilities (water and sewer), and basic public institutions and facilities (education, health, open space, and so forth). By careful control of these levers (and an improved regulation of private development than that found in current zoning and subdivision control) private development for the most part would be subtly channeled in accordance with the desires of public policy. Such planning would be in keeping with traditional notions of the relations between laissez-faire private activity and strategic public intervention to correct inequities or to curb the abuse or wastage of natural resources.

There are many questions one might raise about this approach. There are, for example, no a priori notions as to the most critical or strategic leverage points. There is no Keynes among urban scholars who has adequately theorized how the city functions and, therefore, how it might be managed. However, this may not be a fatal flaw, and the approach suggests a very easy answer to Banfield's tension. Certain strategic policy areas would be agreed by all to be relegated to "central" decisionmaking and everything else would be "social choice" constrained only by certain basic, but minimal, "rules of the game."

d. *Ad Hoc Opportunism*

One finds little discussion of this method in the planning literature. It has had some formal recognition and many examples of how it operates can be found. One such example is in a current demonstration program of housing rehabilitation being carried on by the New York City Rent and Rehabilitation Administration.[42] Essentially the method is as follows: operating within certain predetermined rules of the game, opportunities to move toward some highly generalized goal are seized as circumstances permit. No particular program is articulated nor is any definite schedule set. No preconceived notions or detailed goals are set forth and, consequently, particularized goals may vary considerably over time.

The New York case will serve to illustrate. The general objective is to improve housing through rehabilitation. The ground rules are that families are not permanently displaced and that rehabilitation will take place within the framework of certain technical standards: that is, those imposed by the city building code and by applicable FHA programs. The rehabilitation work will be carried out by private owners in return for which the owners will be entitled to charge higher rents and/or take advantage of the tax exemption and tax abatement provisions in local law. Rent supplements are used to prevent displacement. In working with the people affected, the program is not announced as a project (urban renewal or otherwise) but rather as an effort of the city to improve their housing. As a first step, vacant buildings, wherever found, are taken over and rehabilitated, creating both a tangible symbol of what is to be done and a permanent or temporary relocation resource. From this opportunities are seized as they occur—a vacant lot is converted into a playground; other vacant lots or dilapidated buildings are acquired for pedestrian paths or expansions to community facilities, additional buildings are rehabilitated. None of the actions are taken as part of a predetermined plan, but are decided with the people of the neighborhood as opportunities present themselves. This method of "planning" is unlikely to produce utopian neighborhoods, but both the housing and the neighborhood are visibly improved with little of the political controversy normally found in urban renewal.

This method has many advantages, but also many obvious faults. Clearly, it only works so long as it does not run afoul of effects outside the area. One must work within a city-wide framework of transportation, utility, and community facility systems which, sooner or later, have to be accounted for.

ALTERNATIVES IN PLANNING CONTENT

The previous discussion suggests that planning could be flexible in its basic strategy and method. Many alternatives are available, none of which is philosophically or methodologically right by the familiar criteria. Similarly, variations in elements of content are also appropriate. Choice of content is not totally independent of choice of method although there are no impediments to discussing them separately.

The selection of issues and problems to be concerned about is extremely difficult; a determination of priorities can seldom be made on wholly objective grounds and frequently incommensurables are competing equally for attention. Yet every planning agency must decide its agenda. A survey of planning agencies throughout the United States would likely yield a substantial amount of variation on the kinds of problems receiving emphasis. This might largely be the result of external pressures on the planning agency. Many times, however, issues are also generated by the planning agency itself, and how and why the agency selects these issues and not others are key questions.

In addition to the scope of planning, variations are possible in the time horizons of planning. Planners have long recognized varying time horizons ranging from immediate problems to policies intended to guide a community for as much as forty (or more) years in the future. Where the emphasis lies may again be (and likely will be) a matter of conscious and deliberate choice on the part of the planning agency. The planning agency in the nation's capital found it possible and appropriate to its environment to expend considerable time and effort on a forty-year plan. For other communities, however, the six-year capital improvements program may have more relevance and therefore more emphasis in the planning program. In still others, much of the planning effort may emphasize work on immediately pending urban renewal projects.

Similarly, there may be varying emphases in ends-means relationships. The planner may try to stimulate considerable public discussion and concern for community goals and strive for public decisions on broad objectives. Or, alternatively, he may pay considerably less attention to goals and focus more on implementing actions and programs. Means and ends are, as suggested by Braybrooke and Lindblom, intimately related and one might expect that undue emphasis on one at the expense of the other may lead to serious shortcomings. Thus, planners need to create some meaningful balance in emphasis between the two—that balance again being related to the environment in which the planning process takes place.

Finally, there is the opportunity for selectivity in the kinds of information the planner chooses to insert into the decision-making process. At one extreme he may provide only the information which supports or justifies his recommendation. At the other extreme, he may flood the scene with any information which has the faintest relevance to the issue in order to indicate objectively all sides of an issue or all possible alternatives. This latter extreme is, of course, impossible to achieve even if one were able to pay the cost. The former is easily achievable but raises some uncomfortable ethical questions. Some choice between these extremes is inherent in the planner's behavior for virtually every public issue.

ALTERNATIVES IN POSITIONING THE PLANNING SYSTEM

It is frequently said that organization charts have little meaning, and that what is really crucial to effective organizational behavior are the lines of communication and the interactions which take place as decisions are made. Nevertheless the formal organization chart does tend to position people and groups of people in a way which implies roles and lines of communication. Thus, the position of the planning function with respect to the planning process *is* important, and various discussions about whether the planner ought to serve in the Mayor's office, the City Council chamber, or the isolated sanctuary of an independent commission are quite relevant.

For the purposes of this paper, four different positions for planning within the decision system are listed, although it is recognized that there are many other conceivable variations. The first is the Walker position that the planner be employed by the chief executive.[43] The second is that suggested by Kent that the planner be employed by the legislative body.[44] The third is the traditional Bassett-Bettman concept of the independent, nonpolitical advisory commission. A fourth position might be that in which planning is dispersed; perhaps the extreme example is found in the New England town where planning is largely dispersed among a number of special purpose ad hoc committees created as needed by the town meeting.[45]

A point of interest about the debate over which position is best is that invariably the decision environment is assumed to be uniform from community to community. Most of the followers of the Walker position insist that a strong mayor aided directly by a well-conceived comprehensive planning program will accomplish far more than a similarly endowed mayor who has to deal indirectly through an advisory commission. Whether this is true or not is of little consequence to a community which does not have a strong mayor. Altshuler gives a convincing argument in support of the independent commission in the Twin Cities.[46] Here, however, the planning function existed in an extremely conservative community with no clear leadership apparent among either public or private groups. Consequentlly, Altshuler's arguments perhaps lose their impact if applied to present-day Boston, Detroit, or St. Louis. Kent advocates that the planner be employed by the city council. This may be appropriate in council-manager cities where it is sometimes difficult to draw a line between executive and legislative functions (or in those few cities in which the voters elect professional planners to the council). Applying Kent's arguments to Banfield's Chicago cases, one imagines that only a planner with an extreme case of schizophrenia could work for such a city council—it would be a superhuman task to attempt to reconcile the fundamental differences between the inner and suburban ward councillors. Thus, the argument over the position of the planning process has meaning only insofar as it bears some relevance to the decision environment in which the planning process is to function.

Synthesis: Adaptations and Convergence

IMPLICATIONS FOR THE PLANNING PROCESS

From this discussion, the emergence of a framework for exploring more sophisticated views of the planning process can now be visualized; one in which the planner might more precisely gauge and influence his community's capacity for making social choices which more closely approximate "planned" solutions. The discussion has suggested that the variables which are to be accounted for are those shown in Figure 1 and are grouped into three basic elements: the nature of the public agenda, the character of the decision system, and the components which make up the planning system. The probable outcome of any given public issue is hypothesized to be dependent on the interactions of each of these elements.

Other implications seem to be suggested as well. For example, while most planners readily recognize that purely rational reasoning processes are not the sole basis for the resolution of public policy issues, more explicit recognition of the other factors which do influence such issues can now be accounted for. One can now begin to recognize more specifically the tensions existing in the decisionmaking process and take more precise accounting of them in devising planning strategy. Such tensions in fact might be summarized as those inherent between stability and change with the political decision system basically oriented to the former and the planning process to the latter.

The policymaker is faced with a situation analogous to Holland Hunter's notion of "optimum tautness" [47]—an "equilibrium of tension"—in which he is continually faced with conflicting demands over resources, requirements, and outputs; demands which are both stretching, or expanding, as well as shifting in relative intensity from year to year.

In fact, one final variable is worth mentioning, and that is time. As suggested earlier, values are continually changing, goals are shifting, priorities are varying—the public agenda never really stands still long enough for one to mount a concentrated attack on it. Moreover, the decision environment itself changes over time. Elections are won and lost, faces and personalities change, new laws are passed, and marginal adjustment of institutional structure continually occurs. A planning system which ignores this will quickly be out of touch and consequently have only a limited capacity to contribute to the policymaking process.

Neither of the Pareto extremes of a society governed entirely by emotion or sentiment versus a society gov-

FIGURE 1 *Conceptual Scheme for Development of Planning Process Adaptations*

CHARACTER OF THE PUBLIC AGENDA

CHARACTER OF GENERATING FORCES
- Broad Based Social Movements
- Maintenance and Enhancement Needs of Institutional Structure

CHARACTER OF DECISIONS TO BE MADE
- Ideological Content
- Distributive Properties
- Time Horizon
- Programmatic Complexity
- Confidence Level Regarding Consequences

GENERAL DECISION SYSTEM

HISTORICAL-SOCIAL CONTEXT
- Social Composition
- Economic Composition
- Political History
- Development of Interest Groups

DECISIONMAKING ENVIRONMENT
- Structure of Influence
  - Formal-Legal Structure
  - Informal Structure
    - Political Process Mechanics
- Bureaucratic Competency
- Information System Development

DYNAMICS OF DECISION MAKING
- Skill and Capabilities of Participants
- Techniques of Debate
- Techniques of Transmitting Influence

PLANNING SYSTEM COMPONENTS

PLANNING STRATEGY
- Probabilistic Programming
- The Coordinator-Catalyst
- The Disjointed Incrementalist
- Advocacy Planner
- Adaptive or Contingency Planner

PLANNING METHOD
- Comprehensive-Classical
- Comprehensive-Systems Analysis
- Cost Effectiveness
- Quasi-Keynesian
- Ad Hoc Opportunism

PLANNING PROGRAM-CONTENT
- Variations in Scope
- Variations in Time Horizon
- Variations in Means-End Emphasis
- Information Selectivity

POSITION OF PLANNING DECISION SYSTEM
- Centralized Executive
- Centralized Legislative
- Centralized Advisory Commission
- Dispersed

erned entirely by scientific method can ever be realized. One might postulate instead a continuum between these two extremes, and any given community is continually changing its position on that continuum. At one point in time, ideologies and values may be relatively stable, and scientific, technical decisionmaking might hold sway; at another point in time ideologies and values may be under intensive reexamination and emotional decisionmaking might prevail. Thus a given community might be viewed as being in a continual state of flux, and the planning strategy appropriate this year might be quite inappropriate next year.

RESEARCH DIRECTIONS SUGGESTED BY THE ANALYSIS

From the discussion preliminary hypotheses might now be formulated for further research. One caution is necessary, however. There are as yet very few working hypotheses as to how one might predict the manner in which the decision system behaves (as Mann and Rossi have suggested,[48] there are currently half a dozen different models of community political behavior); there are even fewer hypotheses as to how one might predict the public agenda at some future time. It is clearly risky to attempt to develop hypotheses respecting an optimum planning system under these conditions. Thus, what is suggested here can only be viewed as tentative and preliminary propositions which are intended to suggest directions for future research.

Hypothesis a. In any decision environment, as the number of independent decisionmakers increase, and as functional responsibilities become increasingly fragmented and specialized among independent decisionmakers, the *capacity* of the system to utilize comprehensive forms of policy-making decreases, while the *needs* of the system to utilize comprehensive forms of policymaking increases. These counter requirements produce tension between the decision system and the planning system; a tension directly proportional to the degree of dispersal of decisionmaking.

Hypothesis b. The extent and character of tension between the planning system and the decision system varies with the characteristics of the issue at hand; such tension rises when the following attributes occur, either individually or collectively:

i. the proposal is basically ideological in content,

ii. the proposal is of large scale or scope affecting many people and many interest groups,

iii. the proposal is irreversible (that is, cannot be changed once decided and acted upon),

iv. the proposal attempts to elicit long-term commitments,

v. the proposal involves complex programming and budgetary requirements including a high degree of coordination and cooperation among many independent actors.

vi. the proposal involves a high degree of uncertainty with respect to probable outcomes or side effects.

Hypothesis c. Tension tends to be created between the originator of an issue or proposal and the decision system; the degree of tension varying with the nature of the issue (see hypothesis "b").

Hypothesis d. Tension between the planning system and the decision system on one issue will tend to carry over to the next issue, but the degree of carry-over will vary with the nature of the second issue (again in accordance with hypothesis "b").

Hypothesis e. Reduction of high tension between the planning system and the decision system requires a strategy and method oriented to incrementalism and short-term, adaptive, remedial, and limited proposals of a problem-solving type; alternatively, tension may be reduced by changing the decision system through centralization or reduction in the number of independent decisionmakers and reduction in specialization.

Clearly, these hypotheses just begin to scratch the surface. But they do suggest fertile directions of investigation. One immediately apparent direction is the probable utility of game theory and its potential for substantially improving planning theory (even recognizing the many limitations that game theory now imposes.)[49] Another direction lies in expanding empirical case studies to develop cross-comparisons of experience in different types of decision environments. For example, it would be fruitful to compare among a number of cities how different decision-systems react to different concepts of the planning system where the issue to be decided is roughly the same, and the position of the planning system is the same. (Such issues should not be hard to find: most major cities have tackled a large, costly, CBD-oriented urban renewal project; and most cities either have built or are building inner-ring freeways.) Relationships could be tested out under controlled conditions, much as the budgetary decision process of Connecticut town officials is being tested under laboratory conditions.[50] Certain key experiments in testing out alternative planning methods would be highly important; demonstrations might be set up to specifically test the operations and implications of disjointed incrementalism, advocacy planning, probabilistic programming, or quasi-Keynesian planning. (As suggested, New York City is already to some degree testing ad hoc opportunism.) Combined with such tests would be selected variations in planning program content.

There is no effort in this paper to suggest that the conceptual framework shown in Figure 1 serves in any sense as a "model" and thereby holds out some implicit promise that someday it will be structured in such a way as to lend itself to quantitative analysis or that it will possess predictive power. While the planner may be able to prepare plans for his city with a computer, it is doubtful that he can plot his overall strategy so neatly. Even should a model, or series of alternative models, emerge after subsequent research, it is doubtful that it would look like Figure 1 in any respect. Our research in this field is obviously primitive and crude. Substantially more work is needed.

This is clearly an important area of investigation; as significant as transportation research, regional development models, or system studies. No matter how we improve our substantive knowledge of how cities function, and no matter how we improve our capabilities in information handling, operations research, and prediction, if there is not a corollary development of the community's capacity for improved decisionmaking within the framework of democratic processes, there is the real possibility that heavy investment in the current forms of city planning technique will have been in vain.

NOTES

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[2] John Friedmann, "The Social Context of National Planning Decisions: A Comparative Approach," Paper delivered at the 1964 Annual Meeting of the American Political Science Association, Chicago, Illinois, September 1964.

[3] Martin Meyerson and Edward C. Banfield, *Politics, Planning, and the Public Interest* (Illinois: The Free Press of Glencoe, 1955); and Floyd Hunter, *Community Power Structure* (Chapel Hill: University of North Carolina Press, 1953).

[4] *Journal of the American Institute of Planners,* Vol. XXXI (November, 1965).

[5] Edward C. Banfield, "The Use and Limitations of Metropolitan Planning in Massachusetts," Paper presented at the Fifth Working Conference on Metropolitan Planning and Regional Development, Joint Center for Urban Studies, Metropolitan Area Planning Council, June 1965, pp. 12–14. See also: Edward C. Banfield, "Ends and Means in Planning," *UNESCO International Social Science Journal,* XI (1959), 365–368.

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[20] David Braybrooke and Charles Lindblom, *op. cit.*, chap. 7.

[21] Banfield, *Political Influence, op. cit.*, p. 263.

[22] Murray B. Levin, *The Alienated Voter* (New York: Holt, Rinehart and Winston, 1960).

[23] The 1965 mayoralty campaign in New York City is one outstanding case of this.

[24] Norton E. Long, "The Local Community as an Ecology of Games," *American Journal of Sociology* (November, 1958), pp. 251–61.

[25] For example, Boston's Government Center Project was not conceived to solve a particular problem but rather to serve a deliberate symbolic goal. Technically speaking, the need for a new city hall and other government offices might be considered a "problem," but one which could have been solved more easily in other ways.

[26] Banfield, *Political Influence, op. cit.*, pp. 325–6.

[27] *Ibid.*, pp. 326–7.

[28] Melvin M. Webber, "The Roles of Intelligence Systems in Urban-Systems Planning," *Journal of the American Institute of Planners,* XXXI (November, 1965).

[29] *Ibid.*, p. 293.

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[32] Braybrooke and Lindblom, *op. cit.*

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[50] Research program recently undertaken by Professor James Barber, Yale University.

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Rational Urban Planning:
Problems and Prospects

DARWIN G. STUART

IN RECENT YEARS, the need for a more systematic, rational approach to urban planning has received increasing emphasis (see Ackoff, 1963; Bolan, 1967; Michael, 1965; Robinson, 1965). According to the rational planning process, the most appropriate and direct means for evaluating alternative urban plans is through a comparison of their relative levels of goal achievement. That plan which contributes most to achieving the goals and values of a given urban area is preferable. Various forms of this process have been advanced, particularly in terms of systematic program budgeting (see Hatry and Cotton, 1967; Hirsch, 1966; Page, 1967; State-Local Finances Project 1969a; 1969b; see also, Mushkin, 1969). Different strategies and techniques for comprehensive goal achievement analysis and planning have also been outlined (see Fisher, 1965; Hill, 1968; Quade, 1967: 292-312; Steger and Lakshmanan, 1968; Teitz, 1968).

Six basic steps are involved in this rational process:

(1) All community goals must be identified, and measurable indices for the achievement of each goal (the outputs) must be developed.

(2) All existing government programs and policies which affect each goal must be identified, and measurable indices of the resources consumed by each program or policy (the inputs) must be developed.

(3) The levels of goal achievement or effectiveness for various alternative sets or combinations of programs and policies must be measured and predicted. The number of alternatives to be tested will depend in part upon the degree of thoroughness desired. This step involves the bringing of inputs and outputs into basic analytic frameworks and mathematical models.

(4) For each alternative, the relative level of goal achievement must be stratified according to affected economic activities, social groups, and spatial locations. Weights must be assigned to indicate the relative importance of these activities, groups, and locations within the entire urban area.

(5) Weights also must be assigned to indicate the relative importance of each goal. Both kinds of weights must be derived so that in some manner they represent a consensus of opinion or value ranking for the entire community.

(6) Finally, on the basis of predicted impacts and relative weights, the alternative with the highest level of overall goal achievement is selected, subject, however, to the application of one or more budget constraints.

This paper examines the efficacy of comprehensive rational planning as a strategy for dealing with complex urban problems. The implications of each of the six steps above, in terms of the practical problems and tasks involved, are discussed in the following section. Many difficulties and weaknesses are identified, particularly in association with the enormous informational requirements of the method. In the second section a more pragmatic alternative to rational planning is presented, drawn from the public administration literature. It emphasizes the strengthening of observed administrative processes and decision-making behavior. In the final section, a compromise model is developed, one which is rational but noncomprehensive, and which stresses a continuing process of successive plan evaluations. Its method is to identify the community impacts over which alternative programs and policies differ, and to illustrate how trade-offs among different impacts might be made. This conceptual strategy model is described using the Model Cities Program as an example. It is recommended as a more workable alternative to comprehensive rational planning.

LIMITATIONS OF GOAL-ACHIEVEMENT MODELS

As outlined in a recent article (Millward, 1968), the implementation of PPBS and related techniques at the local government level faces severe difficulties. Once a series of activities has been identified as an interrelated program group aimed at one or more specific objectives, it is likely that such activities will actually be scattered through several government agencies, bureaus, or divisions. Attempts to bring these together into a single, coordinated program will meet strong institutional and bureaucratic resistance. The potential reorganization of agency functions and activities will constitute a threat to the existing hierarchical structure and familiar working relationships.

While administrative problems such as these are undoubtedly of major importance, even more serious conceptual and operational difficulties can be anticipated. These deal with the practical problems of trying to identify, measure, and weight the various programs, policies, impacts, and goals which make up goal achievement matrices. The following paragraphs discuss in some detail the kinds of difficulties to be overcome in each of the six basic steps of comprehensive rational planning and plan evaluation. So many problems are foreseen that in subsequent sections, a less ambitious framework for decision-making is developed.

Identify Community Objectives

One of the first problems to be dealt with lies in deciding what kinds of values, goals, and objectives are to be analyzed. More abstract and philosophical values, such as increased personal freedom and greater dignity, should be avoided. These are notoriously difficult to investigate quantitatively and can almost always be adequately expressed as a series of more specific goals and objectives.

The kinds of general goals which cities often set for themselves, such as improving the residential environment, strengthening and diversifying the economy, or enlarging human opportunities, still suffer from a certain ambiguity as to how they might best be measured. There is also a considerable amount of overlap among such general goals. The achievement of one will also help to achieve others, often through very complex kinds of social and economic interdependence. It is extremely difficult to say how much each goal depends upon each of the others.

Consequently, it is desirable to look for more detailed statements of desired outcome, particularly those which seem to be somewhat independent of one another, and which are also amenable to quantitative measurement. The development of specific planning objectives of this type should, in fact, be directly accompanied by the design and exploration of indices or measurable criteria by which to evaluate the achievement of each objective. Objectives should normally be developed in such functional areas as employment and family income, housing, health and welfare, education, physical environment, and transportation.

Attempts to identify specific community objectives in this manner—say four or five objectives within each functional area—must face at least three important limitations or weaknesses. First, as we become more specific in expressing desired ends, there is an increasing tendency to end up describing public programs and policies themselves. For example, identifying the objective of providing higher educational facilities for students who may not desire a full four year curriculum is practically the same as describing a program to improve and expand junior college facilities. This phenomenom, an aspect of what is sometimes known as the "means-ends hierarchy," may make it quite difficult to compare objectives and programs in any meaningful, measurable way.

Second, interdependencies among objectives still may present serious problems, in that we are most often unable to determine to what extent one objective will influence those which interact with it. The determination is necessary so that we can examine how alternative programs aimed at one objective will also help to achieve others. The most obvious example lies in the better education, fuller employment, higher family income cycle. If one of our educational objectives is to provide maximum opportunities for increased schooling, then we should have some grasp of its interrelationship with a family income objective to ensure that all residents have adequate or minimum disposable incomes. In this way, we can compare how educational programs such as vocational and technical training, Manpower Development and Training, Neighborhood Youth Corps, and adult education classes serve to achieve both objectives.

Third, the decision to choose one objective over another, to express an objective in a slightly different way, or to settle on one criterion measure instead of another means that we must inevitably overlook some potentially important aspects or features within a functional area. In order to have a workable set of overall objectives, together with measurable criteria of achievement which do not strain our information resources, we will necessarily be forced to make such decisions. Often these omitted features will be unusually hard to measure. For instance if one of our housing objectives is to expand the supply of low and moderate income housing, and we choose as our index simply the annual number of units of various types provided, we may be overlooking important qualitative considerations as to aesthetic design,

tenant satisfaction, and/or project building density. These aspects might not be adequately covered in other housing objectives.

Identify Programs and Policies

While it might seem a relatively easy task to identify governmental programs and policies in need of evaluation, since these programs and policies have themselves brought forth a need for a more rational planning, such is not the case. Effective rational planning requires that programs and policies be redefined in terms of the objectives they are intended to achieve. This step enables basic goal-achievement matrices to be constructed, with programs on one axis matched against objectives on the other. Several important difficulties are likely to occur when programs and policies are treated in this way.

For instance, it is usually preferable for similar programs within different agencies to be grouped together as a single, coordinated program, i.e., the recreation, park, and open space programs of city park departments, county park agencies, state conservation departments, and various other public and private organizations should all be identified together. It is also often preferable for dissimilar programs which contribute, in part at least, to a common objective to be grouped together as a program package, i.e., the maintenance of attractive residential environments involves the coordination of code enforcement, street improvement, park expansion, school improvement, housing rehabilitation, urban renewal, urban beautification, and other programs.

Because such program groupings cut across agency lines, and because they may be structured and oriented differently within different agencies, it may sometimes be quite difficult to pull out and properly identify various common objective programs. In addition, the same interdependency problems which may affect community objectives can also cause difficulty here. Different public programs may depend upon companion actions by other agencies for full implementation or effectiveness. The urban renewal program is an obvious example, requiring, within specific projects, the possible coordination of land clearance, relocation, redevelopment, street improvement, freeway construction, park development, sewer and water improvement, and other public and private programs.

At least three other kinds of problems can also be suggested. It is often necessary to try to split or allocate programs among several different objectives, and to determine relative emphases in achieving these ends. This can lead to severe measurement problems. For instance, how might we define the relative importance among objectives for the Job Corps program–reducing unemployment, increasing educational levels, providing adequate incomes, improving physical and mental health, reducing crime rates? In addition, how can we be sure that we have identified all the objectives to which a particular program pertains? Would the Job Corps program also significantly affect the demand for low-income housing and the maintenance of attractive residential environments?

Third, and perhaps more important, where does the design of new programs, the development of innovative alternatives, fit in? An apparent weakness of goal achievement matrices lies in their structural and procedural emphasis upon existing public programs and policies. The main focus of attention can easily lie upon allocating total budgets among this array of programs, upon making incremental shifts among existing programs to better achieve our objectives. The large amount of conceptual and empirical work needed simply to analyze present policies and programs threatens to overshadow the crucial importance of searching for entirely new alternatives.

Predict Effectiveness Levels

Suppose that, in spite of these kinds of difficulties in identifying community objectives and public programs and policies, we are able to rough out a programs-objectives matrix which seems reasonably satisfactory. We will have had to spend considerable time and resources developing quantitative indices which represent each objective and program and in developing objectives and programs which are themselves conceptually consistent. Hopefully, we will also have identified a number of new, innovative programs and policies which we would like to evaluate. Our assignment is to now predict levels of goal achievement within the matrix, given different combinations and emphases among programs.

If programs are represented as rows, one of these rows might be housing and building code enforcement. Correspondingly, one of the objectives columns might be to ensure that all housing units are in adequate, sound condition. The number of building inspectors, the number of code violations suits filed, or the number of buildings entering receivership might be the quantitative measures representing this program, while the proportion of repeat code violations or substandard conditions reported by social service agencies might serve as measurable criteria for achieving the objective. Minimum acceptable achievement levels or standards, such as a substandard housing rate no greater than the current vacancy rate, might be established for this objective as well as for others. What would be entered in the cell where this particular row and column intersect?

In general, we would like to enter the number of goal units achieved –reduction in substandard housing units, the given level of program investment or commitment–number of building inspectors. We would proceed to compare each program in the matrix against the full set of community objectives, in some cases selecting different goal-achievement criteria (for the same objective) where these seem more appropriate; we would note possible negative goal achievements–programs which actually detract from certain objectives. In some cases we would group programs together for a single matching against other objectives. Where possible, we would like to sum the overall column achievement for each objective within each given set of alternative programs to be tested, but we are more likely to rely upon program by program, objective by objective comparisons.

Two key activities must be undertaken in order to fill in each relevant cell within such a goal-achievement or programs-objectives matrix. First, analytic techniques and mathematical models must be developed to predict how program input variables, appropriate intervening variables and parameters, and output objective variables will interact. Many of these variables will be represented simply by the quantitative indices for programs and objectives previously established, while others will have to be newly developed. A research program into urban socioeconomic interrelationships of some magnitude is implied. Second, appropriate and necessary information resources and data collection programs must be developed. This implies as well a considerable investment in improved urban information systems.

Analysis and model building. Both of these topics have been the subject of growing attention in the planning and urban research literature. Reviews of model building by Lowry (1965) and Steger (1965) provide us with many insights into the tasks and problems of building predictive models for comprehensive rational planning. While many different research directions might be taken in developing new techniques for urban socioeconomic analysis, we will here be guided by the need to predict relative effectiveness levels for alternative public policies and programs. This gives us something of a pragmatic, action-oriented posture, dealing as best we can with cause-and-effect, input-output kinds of empirical relationships. Very often, but necessarily, we will use models which rely on computer assistance.

As Lowry (1965: 159) notes, it is the very difficult job of the model builder to "perceive repetitive temporal patterns in the processes of urban life, fixed spatial relationships in the kaleidoscope of urban form." If we are able to identify such stable relationships, then we attempt to express them in terms of mathematical equations and formulas. In general, we seek more than simple descriptive models which are designed only to replicate static or existing conditions. Such models may be of value, however, in permitting reliable estimates to be made of hard to measure output variables from easy to measure input variables. More often, we are interested in predictive models which are built, in one way or another, around implied or observed causal sequences. Given a logical framework of interrelationships, we wish to be able to say that, for some future value of a particular input, program, or "cause," we may expect corresponding future values for relevant output, objective, or "effect" variables.

A number of practical considerations can easily make the model building or prediction phase of plan evaluation a complicated, lengthy process. Unless these practical aspects can be properly handled, the usefulness of predicted effectiveness levels may be seriously threatened. One of these factors is choosing the most appropriate level of aggregation–families, census tracts, traffic zones, community areas. Another is the handling of time in different models–the expected time lags between inputs and outputs, the presence of equilibrium concepts, and the frequency with which a model should be used. A third is the choice of mathematical technique or solution algorithm for actually operating a model. These may include simple algebraic equations; multivariate statistical techniques (such as linear multiple regression and factor analysis); gravity, potential, and network flow models; and Monte Carlo or stochastic simulation models.

Many different models and submodels will be required to fill out all the appropriate cells in a program-objectives matrix. Some models may relate a single program to a single objective (perhaps community health center services and a reduction in key disease rates) while others might relate larger program packages to several interrelated objectives. For example, we might wish to develop a relatively large-scale socioeconomic simulation or impact model for testing the effects of the Federal Office of Economic Opportunity programs. Here we would be working with

such programs as the Job Corps, Neighborhood Youth Corps, Manpower Development and Training, Older Workers Program, and Youth Opportunity Centers, and with community objectives in such areas as unemployment, family income, housing rehabilitation, juvenile delinquency, and school dropout rates. Hopefully, we would be able to vary each program within the model and observe how overall levels of goal achievement are changed.

Urban information systems. Improved information systems will be an essential and integral step in strengthening our model-building and analytic capabilities. A wide variety of problems may be anticipated in trying to coordinate the data files of administrative agencies which operate with relative independence. Compatibility with federal censuses (population, housing, and others) must also be sought. Major differences in collection methods, timing and frequency, identification and coding techniques, and spatial disaggregation procedures are likely to cause great difficulty. Without basic agreement in these areas, we will be greatly handicapped in trying to build and test flexible analytic models which relate social and economic output variables to administrative input variables, the latter often cutting across agency lines. Many of these variables will, of course, have been previously identified in our work with measurable indices for objectives, programs, and policies.

Effective analytic support of goal-achievement matrices is also quite likely to call for the development of new data sources from existing administrative records. Major problems will result in trying to encourage the reorganization of agency record keeping and data storage procedures. The various operating programs of both the federal government and local governments represent substantial sources of data most often unavailable on a spatially disaggregated basis–a particularly restrictive characteristic. Examples include local record systems for various welfare programs, the public schools, property taxes and assessments, state employment services, various licensing records, health and medical records, state sales taxes, and others. The growing use of computers to increase the operating effectiveness of such administrative records offers hope for concomitantly increasing their statistical or analytic usefulness.

The scale of commitment which might be required in developing adequate information resources is potentially enormous–so much so that, within a PPBS framework, the development of an information system for a single program can snowball into a major assignment (see Siegel, 1968). In addition, of course, is the major research commitment which will surely be needed to develop an acceptable series of analytic models. Three additional factors emphasize the major problems and limitations of such large-scale efforts.

First, it is quite likely that problems both with data availability and with the need for modifications in analytic techniques will force us to continually reexamine our original quantitative indices. We may often find it necessary to define new indices and criteria, to look for surrogates which might be less satisfactory conceptually, but which are required for operational purposes. At times we may also actually have to search for new objectives, or at least for redefinitions of old ones, for similar operational purposes. We may even be forced to rethink our original programs-objectives matrix, or parts of it, at the risk of redoing considerable amounts of completed work.

Second, there is the real uncertainty surrounding the validity and reliability of most of our models. We will usually not have sufficient past data to test their predictive power, even assuming that such tests would be adequate. We simply have no assurance that unanticipated forces and shifts among variables will not lead to large predictive errors, especially for longer-range models. Significant errors can also be introduced simply through data imperfections (see Alonso, 1968). Third, and partly as a result of these uncertainties, we must always maintain the perspective that the results of our quantitative analyses and predictions, whatever their merit, are only intended to sharpen the judgment of political decision-makers. The experiences and intuition of these decision-makers, together with additional qualitative analyses, are vital, final-stage decision components.

Stratify and Weight Effectiveness

We have spent many months, probably years, in research and experimentation, designing, testing, and redesigning those analytic models needed to fill out our programs-objectives matrix, concurrently working our way through the maze of problems and details involved in locating, collecting, manipulating, and even generating needed data. In short, we have finally predicted the effectiveness levels for some given set of alternative programs. We now enter the most crucial stage of the rational planning process: evaluating the results of our predictions. In general, two kinds of evaluations must be made. First, we must determine the relative importance of the specific activities, groups, and subareas for which programs will be effective. Second, we must determine the relative importance of each community objective.

Only very rarely if ever will a government program have uniform application across an entire urban area. Almost inevitably a program's impacts, consequences, and benefits will fall upon particular segments of the population or sections of the city. Impacts must consequently be stratified and identified in terms of these incidence groups, and the relative importance or magnitude of each group determined. For example, urban renewal programs are aimed at older central city neighborhoods, while OEO poverty programs serve low income families. These neighborhoods and families form only a certain proportion of the city's developed area and population.

How important is one incidence group compared to others? How important are those groups (other subareas, other socioeconomic classes) which have been left out, upon whom various programs have no effect? Should large-scale redevelopment of inner-city neighborhoods be given preference over large-scale rehabilitation of neighborhoods further out, or should we concentrate instead on strengthening key industrial development districts? Clearly, for public programs and policies to be in the best public interest, these kinds of weightings must be arrived at through some sort of sensing of public opinion and community wide valuations. Problems to be faced in weighting incidence groups are the same as those involved in weighting community objectives. They are considered together in the following paragraphs.

Weight Community Objectives

It is highly unlikely that general public opinion polls to determine community weightings would be feasible or even meaningful. Costs would be exorbitantly high and potential questionnaire structures complex enough to cloud the validity of results. We will usually be forced to turn to secondary and representative sources: politicians, administrators, community organizations, business and industry leaders, planners, educators, public hearings, and perhaps a few well designed, limited-range public surveys. These kinds of investigations are of such critical importance that they can, in fact, serve as inputs to the first step in comprehensive rational planning–identifying community objectives themselves.

As Hill has observed:

> In practice, goals and their relative weights may have to be determined iteratively as a result of a complex process of interaction among elected officials, administrators, planners, and various formal and informal groups reacting to explicity stated objectives and the alternative courses of action

> proposed to meet these objectives. The determination of community objectives and their relative valuation by the community is thus no easy task and requires considerable research [1968].

Transportation planning examples. Two recent transportation planning studies clearly illustrate the depth of potential objective weighting problems. A Louisville report develops an approach to the evaluation of alternative design concepts using a single set of weighted community decision criteria (see Schimpeler and Grecco, 1968). A task force from the Mayor's Citizens Advisory Committee was used as a representative community decision-making group for criteria evaluation. Though it was assumed that such a group would eventually be involved in actually structuring a list of specific community objectives or decision criteria, the list of some 35 objectives actually evaluated was put together by local planners. The hope was also expressed that a more diversified evaluation group, including elected officials and influential businessmen, could eventually be used.

Each member of the Mayor's Committee was asked to individually weight each objective, using both a raw ranking and a rating scale technique. In the first technique the general idea is to rank order all objectives from one to 35, then determine overall rankings by summing those of individual members. The second technique utilizes a zero to ten rating scale, and asks individual members to rate each objective as to relative importance along this scale. Overall ratings are again the sum of those of individuals. The normalized results of the two methods are then combined to get an average ranking or utility value. The objective to preserve historic sites and areas of natural beauty, for example, received a utility weight of .0192 (average rank of 21), while the objective to provide adequate low cost housing received a weight of .0240 (rank of 11).

A Spokane study attempted to measure the relative importance of nine transportation planning objectives, four tangible and five intangible (see Falk, 1968). The method was again developed in association with a Citizens Advisory Committee. Proceeding from the assumption that frequency of citizen preference for one objective or decision factor over another is directly related to the importance of that objective, each committee member was asked to work his way through a checklist of paired comparisons, matching each objective against each other objective. After summing the results and performing a series of normalizing operations, a relative preference rating was assigned to each transportation planning consideration. Accident costs received the highest rating of 6.00, travel time costs a rating of 1.32 (both tangible), and intangible social factors involving effects on surrounding neighborhoods a rating of .96.

Methodological problems. These methods for weighting community objectives are quire crude, considering the crucial importance which this step holds within the rational planning process. Though admittedly they are only first steps, it is difficult to imagine significant methodological improvements which are not either complicated enough to confuse those tested, exorbitantly expensive, or equally inconclusive in their results. It is unlikely that citizen advisors or any other small group adequately represent the city at large. Expanding the sample to include members from all socioeconomic groups has been suggested (Schimpeler and Grecco, 1968: 134), but, within reasonable survey budget limitations, we then face difficult decisions as to types and numbers of groups to sample, alternative questionnaire techniques, and the possible weighting of groups themselves.

The Spokane study found that rankings by different groups (civil service employees and college students) differed significantly. How should this eventuality be treated? The Louisville study found that results varied markedly by technique utilized (ranking or rating). Twelve of the 35 objectives received a rank difference position of ten or more, while ten varied by five-nine ranking positions. Which of several possible weighting techniques are to be preferred and why? These kinds of potential limitations and inconsistencies are serious enough to merit long and hard reflection before proceeding further. Results of this type do not inspire the confidence needed for meaningful application within comprehensive rational planning. Yet, as Hill (1968) has noted, the key to alternative plan evaluation by means of goal-achievement matrices lies in the weighting of objectives, activities, locations, groups, or sectors.

In addition, both the Louisville and Spokane studies note that the objectives which were actually considered are too general to be really useful in plan evaluation contexts. They should be stratified into more detailed, more specific components. If this is done, what is the danger that objectives will then become too technical, too project specific, and too difficult to understand, both for citizens advisors and other laymen? In fact, the Spokane report suggests that only a jury of experts would be qualified to assign relative values to a more detailed set of transportation planning objectives (see Falk, 1968: 59). With such increases in detail and specificity, what survey methods would be able to effectively manage a full set of community objectives, say 100 or more in number? What test groups could meaningfully comprehend such a survey? In short, is a comprehensive weighted hierarchy of community objectives a realistic possibility?

Identify Preferred Alternatives

The final step in the rational planning process is the selection and recommendation of that alternative or set of alternatives which attains the highest level of goal achievement. In its simplest form, this step is quite straightforward, provided each of the other steps in the process has been carried out successfully. For instance, utilizing an effectiveness matrix technique, we simply multiply the relative utility of each objective by the predicted level of effectiveness (normalized) that each alternative will have in achieving that objective. Then, for each alternative under consideration, we sum these products to get a total utility score. The alternative with the highest score is to be preferred (see Schimpeler and Grecco, 1968: 131-133). Results of this technique might be summarized in terms of the specific plans, programs, policies, or projects under review. In Spokane, for example, a "roadway alternative evaluation table" was developed.

We gain added realism, however, when the costs of each alternative are balanced against its total utility score. Government policies and programs are, of course, enacted under very real budgetary limitations. The utilization of these budget constraints as a part of comprehensive rational planning can often be crucial in identifying the best feasible alternative. This general plan evaluation technique is known as cost effectiveness analysis. In general, there are two broad approaches possible in applying budgetary or cost constraints (see Fisher, 1965: 42). First, under the fixed utility approach, we choose that alternative which attains some specified minimum level of total utility at the lowest overall cost. Second, under the fixed budget approach, we choose that alternative which attains a maximum level of total utility for a given, fixed budget. In either case, we may be forced to pass over highly rated alternatives because they are too costly.

While normally we would think of costs only in dollar terms, complications can arise if we wish to also consider other resources consumed, opportunities foregone, or conflicting objectives unachieved. Hill (1968: 23) has ambitiously proposed that all costs be represented as negative contributions to objectives, so that each quantifiable objective would have a cost benefit account in terms of the same measurable index. Costs, like benefits, would fall upon specific incidence groups. While presumably one of these incidence groups would be the taxpayers who must pay for government programs, the notion of determining all unfavorable impacts upon particular groups is a challenging one. Another kind of important constraint might be the specification of minimum achievement levels or standards for particular objectives, regardless of their relative weighting, so that a certain portion of scarce resources (land, labor, capital) would be firmly committed.

The potential application of mathematical programming models in this final stage of plan selection should also be mentioned, though our experience and capability in this area is currently quite limited. In general, the idea is to define public investment alternatives or program policy variables in terms of a single input metric—probably dollars. Associated with each investment alternative might be an aggregate utility score representing all the community objectives to which it would contribute. Alternatively, associated with each objective might be a minimum performance standard which must be achieved. In the first instance, the objective of the model would be to maximize goal achievement, provided the total available budget is not exceeded. In the second, the objective would be to minimize the total budget spent, provided that minimum performance standards are met.

The great advantage of mathematical programming is that the technique itself generates a large number of alternative overall programs, considering many more combinations of program policy variables than we could put together by hand, and ends up selecting one combination which is optimal. This optimality, defined either in terms of maximum utility or minimum budget, will be subject to certain additional constraints—certain minimum expenditures for education, recreation, housing, and the like, must be achieved; maximum expenditures in other areas cannot be exceeded.

The difficulties which stand in the way of effective development of this conceptually appealing kind of mathematical model are essentially those confronting the rational planning process itself—identifying, measuring, interrelating, and weighting objectives; measuring, predicting, stratifying, and weighting effectiveness. Because our capabilities in these areas are at present quite primitive, the development of public investment programming models is not far advanced. A recent application of integer programming in transit planning, for example, used only four objectives and one program policy variable—transit extensions—which were further limited to an all or nothing appearance in the solution (see Jessiman et al., 1967).

THE LINDBLOM STRATEGY

The questions and problems posed in preceding sections are clearly of monumental proportions. Our present ineptness in handling them suggests strongly that comprehensive rational planning is impractical and inappropriate as a strategy for evaluating alternative urban plans, programs, and policies. The method simply calls for much more knowledge than we are realistically able to bring to bear at any given point in time. There is small consolation in the admonition that though we may never be able to attain the ideal of rational planning, its systematic, comprehensive approach should nevertheless guide our thinking. The rational approach tends in practice to break down rather quickly.

Can other logical frameworks for planning and public decision-making be devised, perhaps less ambitious, more pragmatic, and more attuned to observed administrative processes? Will such frameworks thereby be more useful as guidelines and evaluation schemes for urban planning? The weaknesses and limitations of rational planning are, in fact, so severe that other lines of thinking have been advanced which substantially reject this approach as a model for governmental decision-making. Lindblom, in particular, develops a strategy which is in some respects a kind of polar or oppositely structured alternative. At one point called a method of "successive limited comparisons" (see Lindblom, 1959), and at another, a process of "disjointed incrementalism (see Braybrooke and Lindblom, 1963), this approach is essentially a behavioral model of governmental policy-making.

The method of successive limited comparisons recognizes that, in practice, the selection of objectives, the structuring of programs and policies, and even the analysis of program policy effectiveness are not distinct activities, but are closely intertwined. As a result, the identification and evalutaion of means and ends are carried on together, and ends are considered only in terms of how they are combined in specific program or policy alternatives. There is no separate classification and listing of goals and objectives. Such an abstract effort tends to overlook local conflicts and disagreement over objectives, calls forth the complex relative weighting problems mentioned above, and is likely to be little used when it comes to actually evaluating specific programs and policies.

Lindblom observes that the relative values of different objectives will often change when the circumstances under which they are being considered and compared change. He remarks:

> That one value is prefered to another in one decision situation does not mean that it will be preferred in another decision situation in which it can be had only at great sacrifice of another value. Attempts to rank or order values in general and abstract terms so that they do not shift from decision to decision end up by ignoring the relevant marginal preferences. Even if all administrators had at hand an agreed set of values, objectives, and constraints, their marginal values in actual choice situations would be impossible to formulate [1959: 82].

Under the Lindblom method, objectives and policies are actually chosen at the same time. Alternative programs and policies are compared in terms of the objectives over which they differ, and these are considered only in terms of how they differ marginally or incrementally. For example, suppose alternative policies X and Y both offer the same level of attainment of objectives a, b, c, d, and e. However, X promixes a somewhat higher level of f, while Y offers a higher level of g. Then the choice between the two policies becomes simply a trade-off of a marginal amount of f for a marginal amount of g. In making the choice of policy, we simultaneously choose its set of objectives (Lindblom, 1959: 82-83).

The method of successive limited comparisons is not without its own faults, however. Lindblom focuses upon systematically describing how policy decisions are actually made in the hope that subsequent practice of the method can be conducted with greater skill. With this behavioral emphasis, there is a tendency to avoid looking for more rigorous or rational kinds of improvement in methodology. The most serious shortcoming lies in limiting policy and program alternatives to those that differ in relatively small degree from policies and programs presently in effect. This restriction is intended to greatly simplify the analysis required for evaluating alternatives by requiring that we examine only those incremental aspects in which a proposed alternative and its consequences differ from the status quo. However, it also forces us to overlook innovative, progressive policies simply because they may not be suggested by the present array of policies. Similarly, obsolete programs and policies may linger unnecessarily through a process of gradual phasing out (Lindblom, 1959: 87-88).

The most important feature of the Lindblom strategy, and the one which makes it especially attractive as an alternative to comprehensive rational planning, lies in its emphasis upon successive comparisons. The rational planning approach, in contrast, suggests that once we are able to construct an acceptable programs-objectives matrix (and develop needed analytic methods and information resources), we may then proceed to mechanically adjust programs and policies as necessary. Eventually, with gradual refinement and adjustment, the method itself will become so powerful that the course of public investments and policies can be charted for years ahead at a time.

The Lindblom method, however, calls for a never ending chain of successive policy choices and analyses. The method is repeated again and again, dealing with new problems and opportunities as they arise, continually adjusting past and present programs and policies, but never attempting or expecting to define a comprehensive, once and for all set of policies. The method assumes that objectives will continuously be revised in the face of changing conditions, and that public policy making will constitute an endless process of successive partial approximations to changing objectives (Lindblom, 1959: 86-87).

A PROGRAM-POLICY TRADE-OFF MODEL

The remainder of this paper proposes a third general model for governmental decision-making, one designed especially to guide the formation and evaluation of alternative urban plans, programs, and policies. In general, it represents a middle-range compromise lying somewhere between the extremes of comprehensive rational planning and disjointed incrementalism (see Dror, 1964 and 1968; Etzioni, 1967 and 1968). The identification and weighting of community objectives, key phases of the rational process, are left out, and the Lindblom method of simultaneously choosing objectives and policies adopted in their place. On the other hand, the design of new programs and policies (essentially absent from both methods) is emphasized, and the central importance of being able to meaningfully predict relative effectiveness levels is maintained. The identification of marginal trade-offs among alternative programs and policies represents the final step in the method. The notion of continuing, successive applications to changing urban problems is emphasized.

This third approach is contrasted with each of the others in figure 1. In addition to its emphasis upon repeated applications, it contains five basic phases:

(1) Currently important community problems must be identified, as reported by local politicians, business leaders, public administrators, educators, the press, community organizations, minority groups, and others.

(2) New programs and policies must be designed which aim directly at solving these problems, and measurable indices of the resources consumed by each program or policy (the inputs) must be developed.

(3) Major community impacts or consequences for each program or policy must be identified, and measurable indices of each impact (the outputs) must be developed.

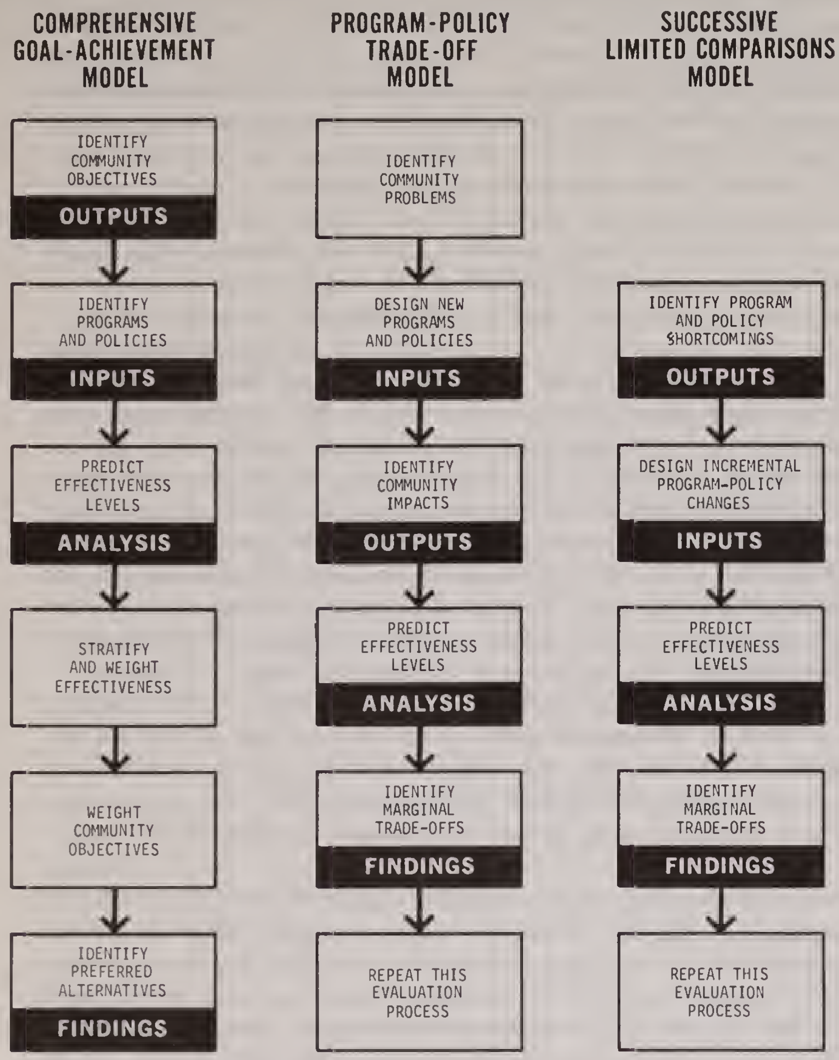
(4) The levels of effectiveness for alternative programs and policies, in terms of the relative impacts achieved, must be measured and predicted. This step also involves the bringing together of inputs and outputs into basic analytic frameworks and mathematical models.

(5) Marginal difference or trade-offs among alternatives, in terms of relative community impacts, must be identified, and appropriate budget constraints applied. These results are presented to decision-makers for any assignment of relative weights.

To illustrate how such a program-policy trade-off model might have relevance and possible application to current urban planning activities, the following paragraphs discuss each step in the process in terms of the Model Cities Program. The federal legislation authorizing this urban improvement program seems, in fact, to anticipate and even implicitly employ the beginnings of this kind of model. For example, the Model Cities Program is: (1) problem-oriented toward the needs of blighted and poverty-stricken urban ghettos; (2) action-oriented toward designing new programs and policies to meet these needs; and (3) effectiveness-oriented in calling for new techniques of evaluation and analysis, so that we may compare the results of different model neighborhood strategies.

Identify Community Problems

The first three steps in the process are closely related, and would in practice be carried out together. In general, the identification of problems would in turn suggest new kinds of potential programs and policies for solving them, while the different impact groups which programs might affect would usually become apparent in working out problem program relationships. There is no real starting or ending place here; the main point is that alternative systems of inputs and outputs must


COMPREHENSIVE GOAL-ACHIEVEMENT MODEL
IDENTIFY COMMUNITY OBJECTIVES
OUTPUTS
IDENTIFY PROGRAMS AND POLICIES
INPUTS
PREDICT EFFECTIVENESS LEVELS
ANALYSIS
STRATIFY AND WEIGHT EFFECTIVENESS
WEIGHT COMMUNITY OBJECTIVES
IDENTIFY PREFERRED ALTERNATIVES
FINDINGS
PROGRAM-POLICY TRADE-OFF MODEL
IDENTIFY COMMUNITY PROBLEMS
DESIGN NEW PROGRAMS AND POLICIES
INPUTS
IDENTIFY COMMUNITY IMPACTS
OUTPUTS
PREDICT EFFECTIVENESS LEVELS
ANALYSIS
IDENTIFY MARGINAL TRADE-OFFS
FINDINGS
REPEAT THIS EVALUATION PROCESS
SUCCESSIVE LIMITED COMPARISONS MODEL
IDENTIFY PROGRAM AND POLICY SHORTCOMINGS
OUTPUTS
DESIGN INCREMENTAL PROGRAM-POLICY CHANGES
INPUTS
PREDICT EFFECTIVENESS LEVELS
ANALYSIS
IDENTIFY MARGINAL TRADE-OFFS
FINDINGS
REPEAT THIS EVALUATION PROCESS

STRATEGY MODELS FOR URBAN PLANNING

FIGURE 1

eventually be identified in quantifiable terms, preparatory to developing analytic techniques for predicting relative effectiveness levels.

A logical or conceptual beginning lies in identifying currently prominent community problems. These may be local issues which are given heavy press coverage, demands made by minority groups through demonstrations and other actions, problems outlined by civic and community organizations, improvements suggested by public administrators and politicians, and problems and trends identified by educators and other urban researchers. No effort should be made, however, to identify all important community problems. Only those which are currently most pressing should be considered. By consistently applying the method in a series of repeated, continuing rounds of analysis, we gain assurance that all important problems will eventually be considered. No attempt is made to define problems in terms of measurable indices. They serve simply as orientation points for public programs and policies.

The Model Cities legislation establishes just such a set of problems, though they remain to be redefined in somewhat more specific local terms (see U.S. Department of Housing and Urban Development, 1966). This is not a full set of urban problems, of course, but only that subset dealing with slums and blight in older urban neighborhoods. Depending upon how they are expressed, such problems can serve equally well as broad goals for relevant public programs. This use as goals should not be confused with the role of more detailed, measurable objectives in the rational planning model. Here goals are general and nonoperational. The goals or problems toward which Model Cities Programs aim have been identified as follows:

> The purposes of this title are to provide additional financial and technical assistance to enable cities of all sizes (with equal regard to the problems of small as well as large cities) to plan, develop, and carry out locally prepared and scheduled comprehensive city demonstration programs containing new and imaginative proposals to rebuild or revitalize large slum and blighted areas; to expand housing, job, and income opportunities; to reduce dependence on welfare payments; to improve educational facilities and programs; to combat disease and ill health; to reduce the incidence of crime and delinquency; to enhance recreational and cultural opportunities; to establish better access between homes and jobs; and generally to improve living conditions for the people who live in such areas, and to accomplish these objectives through the most effective and economical concentration and coordination of federal, state, and local public and private efforts to improve the quality or urban life [Demonstration Cities and Metropolitan Development Act of 1966].[1]

Design New Programs and Policies

The emphasis above on new and imaginative proposals is the keynote for the second step in the process. One of the most promising and important features of the Model Cities Program is that wide options are left open for cities to design their own coordinated neighborhood demonstration programs. In concept, at least, many different combinations and permutations of both old and new programs and policies might be acceptable for federal supplementary funding. The chief requirement is that the overall program "is of sufficient magnitude to make a substantial impact on the physical and social problems and to remove or arrest blight and decay in entire sections or neighborhoods . . ." (Demonstration Cities and Metropolitan Development Act of 1966).[2]

The various projects and activities which might make up such a program will draw upon many ongoing programs and existing agencies. For example, in developing broad standards for ensuring that Model Cities Programs will be comprehensive and coordinated, a number of familiar program components have been suggested (see U.S. Department of Housing and Urban Development, 1966: 8-10). The exact approach and emphasis appropriate for interrelating these typical components will depend on the nature of local social, economic, and physical problems, and the size and circumstances of particular cities. Such components include the physical improvement of neighborhood environments, housing for low and moderate income families, transportation and access to employment, educational facilities and services, manpower training and economic development, recreational and cultural facilities, crime prevention, health facilities and services, and social services and public assistance. Each of these are, of course, already the general responsibility of existing local agencies.

The importance of this second step lies in the potential for breaking up present agency programs into smaller, individual parts, and recombining and regrouping these parts into coordinated packages which are more relevant to actual needs and problems. These new packages would be quite likely to cut across current agency lines. New program elements, not now in existence, might be needed to fill gaps in overall service. The main purpose served would be an analytic one, restructuring programs according to their effects upon community problems. Actual administrative reorganization would not necessarily be implied, though in some cases more efficient relationships could become evident. The implementation problems associated with comprehensive goal achievement and PPBS models would not be quite as serious here.

Though the emphasis in this phase is upon designing new programs, so that the key role of innovation and experimentation in solving urban problems will be prominent, in practice we will often be dealing with existing programs and policies. As shown in this Model Cities example, we will look for new ways to structure such programs, examine their interrelationships with other programs, and in general attempt to define and discuss existing programs in terms of how they can and cannot meet current needs. This orientation toward problem solving will provide a basic framework for systematically considering many different potential programs and policies. Those already in existence will be examined for wide ranging possible improvements, not limited, of course, to simple incremental shifts among budget catagories. However, we will not deal with all government programs and policies, simply because many (such as sewers, water supply, and streets) provide standard kinds of services not aimed at particular problems.

Identify Community Impacts

As in the rational planning method, programs and policies must be expressed in measurable terms, representing the inputs for analysis and evaluation. Similarly, a set of measurable outputs must also be identified. Though these may often be related to the problems and goals of step 1, this is not a necessary requirement. Through the practice of carrying out the first three phases of the method together, the outputs will be identified and grouped together in terms of the groups and locations affected. These may be intentional or unintentional consequences and outcomes. Because goals, objectives, programs, policies, and impacts will often be indistinct from one another, defined in the same general terms, impacts will be discerned and singled out in an informal kind of way.

This step will be a counterpart to the identification of objectives in the rational method, but without any rigorous listing or classification. Outputs will be measured in terms of incidence groups and locations only, which may or may not be associated with objectives in the rational approach. No attempt will be made to identify all possible impacts. Only those impacts and consequences which occur to us during the intertwined examination of problems, programs, and policies will be considered, and then only the most significant ones. The analysis of outputs will not be comprehensive; in fact, it will be greatly simplified in comparison to the rational method. What if neglected impacts turn out to be of critical importance? This is the key value of stressing the notion of *process* in applying the overall method—the chances are high that all important impacts will eventually become known through repeated, successive rounds of evaluation.

In general, the impacts of the Model Cities Program will be more specific reflections of the physical, social, and economic goals cited earlier. By definition, the location of most physical impacts will be within the model neighborhoods under study, while most social and economic impacts will be felt by low and moderate income families living within those neighborhoods. Thus, though the scope of the program is a full one in terms of potential projects and activities, its effects will be felt by a relatively small proportion of a city's area or population. Outside impacts might be felt, however, by absentee landlords, mortgage lending institutions, commercial home builders, industrial areas in other sections of the city, as a result of major transportation system improvements, in response to open housing practices, or in other ways.

Though such physical impacts as changes in the number of substandard housing units, in the number of rehabilitation building permits issued, in the proportion of aged and low income persons living under adequate conditions, in commercial vacancy rates, and in other kinds of physical indices, will be important, social and economic impacts will generally be more far reaching and crucial. They will often be much harder to assess. Included here will be impacts involving unemployment and underemployment rates, welfare caseloads, the proportion of families above poverty income levels, infant mortality rates, various disease rates, juvenile delinquency and other crime rates, the number of new jobs provided, successful job training placements, housing relocation loads and records, school dropout rates, levels of citizen participation, and longer-range follow-ups on Head Start, Upward Bound, adult education, and other special educational programs.

Predict Effectiveness Levels

Any systematic procedure for evaluating public programs and policies must rely heavily on analytic techniques for predicting expected outcomes. There must be some sort of method for estimating and anticipating the relative effectiveness levels of alternative program packages. As a result, the same sort of problems and tasks involved in developing mathematical equations and models mentioned earlier will also be present in working with a program-policy trade-off approach. However, because we will deal with a much smaller and more manageable set of inputs and outputs, the amount of research and analytic effort required for model building will be correspondingly greatly reduced.

What kinds of impact or effectiveness models seem appropriate for the Model Cities Program? The fact of the matter is that very few if any usable, proven models are currently available. Very little systematic analysis of the relationships between the kinds of programs and impacts mentioned above has previously been conducted. Because the Model Cities Program is one calling for immediate action, as well as for significant progress in alleviating problems within a relatively short time (presumably five years or less), we are actually forced to proceed with new projects and activities without prior estimates of effectiveness. This is the experimental or demonstration aspect of the program; we are really testing alternative solutions at the same time that we implement them.

The resulting implications for specific model neighborhood programs are that three key, interrelated directions of analysis and research should be pursued. First, an information gathering capability must be organized, so that relevant data regarding program inputs and outputs will be available. Such an information system must be internally consistent, relatively complete, and maintained on a continuing basis. It should be a top priority program assignment so that from the beginning we will have data resources sufficient to evaluate program performance. Where possible, relevant data for previous periods should also be collected. Flexibility to revise data formats and to continually add or delete new data items should be assured.

Second, the information system can be used to monitor the ongoing performance of certain program components (mainly those for which data is reported on a monthly basis, such as employment and welfare activities). By examining the short-term or the month-by-month variation in important impact or output indicators, we can decide whether a particular project or activity is as effective as we had originally hoped, and can increase or decrease program inputs accordingly. In this way, we will attempt to review rather quickly the appropriateness of program components inaugurated without any explicit knowledge of what their effect would be.

Third, the information system and the results of the monitoring studies should be used to develop predictive models, for evaluating alternative *future* courses and strategies for the program. As Model Cities projects and activities develop and stabilize, and we begin to consider their possible continuation, acceleration, or deceleration, we should also begin to construct and apply the kinds of predictive models we would have liked to employ from the very outset. We may wish to predict effectiveness levels for continuation in present model neighborhoods, for application in other areas of the city, or, if our results have been especially encouraging, for application to model neighborhoods in other cities. We will particularly want to examine alternative stresses and emphases among program components. Though the analytic workload will be much more realistic and manageable than under a comprehensive rational planning approach, it will still be a heavy one. In particular, we will want to conduct supporting research into basic input-output relationships, possibly utilize the results of research conducted elsewhere, and we are quite likely to discover unmet data needs.

Identify Marginal Trade-offs

Assume that we have been able to develop a reasonably adequate set of predictive models. As with the rational planning approach, many different kinds of mathematical equations and statistical relationships might be used. Though a substantial amount of research and analysis will be required, it will be considerably less than that called for in the comprehensive rational method. Inputs have been limited to programs and policies which promise to solve current urban problems. Outputs have been defined only in terms of the major impacts and consequences anticipated for these programs and policies. Our evaulation strategy is to examine these problem solving inputs and outputs through continuing, successive rounds of analysis, predicting and repredicting their expected interrelationships under changing urban conditions.

How will we utilize these predictions for evaluating alternative combinations of programs and policies? In contrast to the rational approach, we will not attempt to identify or select preferred alternatives; this is a task left for local decision-makers. Our role will be simply to effectively communicate the results of analysis. Broadly, we will focus on two kinds of information: (1) identifying impacts which are the same for each alternative, and comparing these with costs; and (2) identifying impacts which are marginally different, and comparing these with costs. Costs will be monetary only, those incurred in implementing various programs and policies. In terms of solving community problems, impacts may be either positive or negative. The only assignment of relative weights involved will be those employed, either implicity or explicitly, by decision-makers in their final choice among alternatives.

In communicating the results of analysis in this manner, several basic steps are likely to be important. First, we will want to know if impacts not varying by alternative are at acceptable levels. Assuming that only generally feasible alternatives have been included for evaluation, we will want to locate satisfactory impact levels involving minimum costs. Second, for those impacts which do vary, we will also want to know how each stands in relation to acceptable output levels. In assisting decision-makers to make subsequent trade-offs among these incremental differences, we will again want to know where minimum costs lie. The use of minimum and maximum performance standards for certain impacts will thus enter here, accompanying a systematic kind of search for minimum cost alternatives.

We will probably be asked to conduct further analyses, raising or lowering the inputs and outputs associated with some projects and activities while holding others fixed, enabling decision-makers to clarify how costs and impacts are related. Our predicitive models will have had to capture sufficiently the interdependencies among various programs to permit this step. In general, in making basic analyses of this type, we will be conducting a series of marginal trade-offs among under- and over-achieved impacts, among less and more costly alternative programs, juggling individual components in search of more productive combinations. We will proceed informally, without any set method for successive marginal analyses, until decision-makers are satisfied that enough information is at hand for their final choices and trade-offs.

In applying this final step to the Model Cities Program, we will, of course, first need a workable collection of predictive models. We may well be able to apply such a trade-off technique in a partial way, as a means for analyzing selected program packages, before other analytic work is fully completed. For example, we may wish to examine different methods for reducing current unemployment: job training and re-training programs, personnel recruitment programs, on-the-job training, industrial relocation, industrial development programs. After a sufficient period of experimentation, data-gathering, and monitoring, the results of pursuing different alternatives can be compared and analyzed, identifying costs, positive impacts, and negative impacts. Appropriate marginal comparisons can be made, including the application of such standards as minimum successful job placements or new jobs created, and such cost constraints as federal OEO funds available. We will predict the future performance of alternative programs, and decision-makers, applying whatever relative weights among impacts they choose, will perform appropriate trade-offs and select a final program combination.

CONCLUSIONS

The purpose of this paper has been to identify some of the many operational difficulties associated with comprehensive rational planning. The prospects of this strategy for urban plan evaluation are not, in practical sense, encouraging. Its requirements for systematic, comprehensive levels of analysis are overwhelming. However, other logical, more limited frameworks and strategies for governmental policy-making have been advanced. Within an urban planning context, the development of new strategy models, combining some features of both rational and other more pragmatic methods, appears to be especially desirable. One such model has been suggested here. This program-policy trade-off approach essentially attempts to identify the most important impacts over which alternative plans, programs, and policies differ, and to illustrate for decision-makers just what these differences or trade-offs are.

A program-policy trade-off model is recommended as an alternative to the comprehensive goal-achievement model of rational planning. Its potential advantages fall in the following basic areas:

Inputs. Comprehensive rational planning calls for the stratification of all existing government programs and policies according to the previously established goals and objectives to which they contribute. A more limited program-policy trade-off approach requires only the identification and design of new programs and policies, in terms of their potential application to currently important community problems. Many of these new programs and policies will actually be improved versions of existing activities. Problems in the stratification and measurement of program-policy inputs will still remain, but at a more manageable level.

Outputs. The outputs of comprehensive goal-achievement models are defined in terms of a community's goals and objectives. Problems in measuring the achievement of often abstract objectives are abundant. A program-policy trade-off model would focus only upon the most important measureable impacts and consequences expected for program and policy inputs. These impacts would be informally related to previously identified community problems, but would not be tied to a formal set of goals and objectives. Some important impacts may be overlooked, while the measurement of others will continue to cause difficulty.

Analysis. Both strategy models call for a heavy commitment of research funds and staff to the development of analytic techniques for predicting expected outcomes. This will require extensive work with various mathematical models and statistical techniques, as well as the establishment of improved and ongoing urban information systems. The development of programs-objectives matrices under the rational planning approach would permit a systematic comparison of relative effectiveness levels for various program-policy alternatives. While such a matrix could also have relevance under a program-policy trade-off approach, it would be much smaller in scale, and would relate programs to expected impacts. The level of research and analytic effort required would be large, but not nearly as great as that implied by comprehensive rational planning.

Findings. Comprehensive goal-achievement models are usually ambitious regarding the recommendations to be made to governmental decision-makers. It is assumed that methods can be developed for weighting both community objectives and program impacts upon different groups and locations. Such weightings will allow aggregate scores for alternative plans, programs, and policies to be computed, so that a single preferred or optimal alternative can be recommended. However, attempts to devise such weighting techniques have revealed very serious operational and conceptual problems. A program-policy trade-off model ignores the assignment of relative weights, and leaves this difficult and essentially subjective task to political decision-makers. The method attempts only to identify the marginal differences or trade-offs among the impacts of alternative plans, programs, and policies. Basic characteristics of these impact trade-offs, such as appropriate performance standards, sensitivities, and costs, are presented to decision-makers for their final evaluation.

Process. The notion of process within comprehensive rational planning is not clearly defined. Goal-achievement models appear to be advanced primarily as ends in themselves. They are granted such potentially great powers that continuing planning and analysis activities seem assigned a secondary role of filling in the cells of some final programs-objectives matrix. A systematic process of continuing analysis is, on the other hand, fundamental to a program-policy trade-off model. No final recommendations are sought, and an inability to fully deal with all significant impacts is acknowledged. Findings will continually be revised, and analyses conducted in a never ending chain of successive comparisons. In particular, the basic steps in the method–identifying and analyzing problems, programs, policies, and impacts–are not carried out individually, but in practice are concurrently and closely interrelated.

Both comprehensive goal-achievement models and program-policy trade-off models are, of course, logical or rational in approach. In fact, in some respects they are not distinct alternatives, but differ mainly in terms of relative emphasis. Both center upon being able to predict relative effectiveness levels, but the program-policy trade-off approach recognized the practical limitations on research capability. It admits that we must proceed on the basis of partial information, and that we must continually revise our predictions and analyses. It emphasized the development of a systematic but noncomprehensive process for compensating for past errors and new insights. In contrast, comprehensive rational planning appears to depend less upon an explicit process than upon an essentially overrational or overly optimistic model for evaluating and weighting goal achievement. A program-policy trade-off model appears to offer a more realistic and useful strategy for structuring the rational planning process needed within our urban areas.

NOTES

1. Public Law 89-754, Title I: Comprehensive City Demonstration Programs, Section 101.

2. Public Law 89-754, Title I: Comprehensive City Demonstration Programs, Section 103 (a)(2).

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Problems, Solutions and Strategies: A Contribution to the Theory and Practice of Planning

*T. J. Cartwright**

The purpose of this paper is to suggest that the nature of a problem governs both the range of possible solutions to the problem and the kind of strategies appropriate for achieving those solutions. The argument centers on the definition of four fundamental types of problem, or namely: simple problems, compound problems, complex problems, and metaproblems. Each of these problem-types is held to entail a corresponding kind of strategy. From this, it is concluded that planners face a persistent dilemma in trying to choose between a broad definition of their problem and an exact strategy for solving it. The closer they come to one objective, the further they get from the other.

The purpose of this paper is to examine the validity and some of the implications of the following proposition: that the nature of a problem determines the strategy appropriate for dealing with it and, conversely, that the use of a particular strategy makes certain assumptions about the nature of the problem to which it is applied. Such a proposition, it is argued, can help to clarify some aspects of planning theory as well as to provide a useful guideline for the practicing planner.

The paper has five sections. The first argues that problems are not objective things, inherent in the so-called real world, but "images" of that world defined by people in a variety of more or less precise ways. The second section describes a general model of a problem and shows how the solution to a problem lies necessarily within the definition of the problem. The third section presents a four-part typology of problems for use (in the fourth section) in the definition of a framework for assessing the appropriateness of planning strategies. A final section discusses some of the implications of these arguments for the theory and practice of planning.

PLANNING AND PERCEPTION

Planning, like any other human activity, is based on individual perceptions of the world we live in. These perceptions may, of course, be shared by a greater or smaller number of people; but the fact that the basis of planning is ultimately subjective leaves the planner a certain amount of discretion in the set of perceptions that he chooses as a basis for planning.

There are many possible definitions of planning, but it is assumed here that, as a minimum, planning means deliberate intervention in some process. Planning may mean something more precise than this for

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some people but, for most people, it probably means *at least* what is entailed in the above definition.

It should be noted that intervention in a process which is not deliberate (i.e., accidental intervention) is not normally considered to be planning. The bridge-player, for example, who (accidentally!) deals himself a handful of spades is unlikely to claim on that basis that he is a good player (or a good planner). In other words, intervention must be designed to achieve a specified purpose or goal. The good planner, like the good billiards player, "calls his shots."

Moreover, the purpose or goal of the intervention normally has to be defined in terms of the process at which the intervention is directed. The chess-player plans to move his rook in an effort to win the game he is playing, and not normally for some ulterior reason unconnected with the game. In short, intervention must be directed toward some deliberate modification of the process in question for it to be called planning.

All this may seem rather obvious, but these points form the basis for another important implication of the above definition of planning. This is that planning presupposes at least two different states of the process in which the planning (i.e., the deliberate in-

tervention) is to occur and that one of these states is regarded as being, in some sense, more desirable than the other. The less desirable state of affairs may conveniently be called a *problem* situation and the more desirable state of affairs may similarly be termed a *solution* situation. Other situations may also be defined, of course; but, at the very least, any kind of planning automatically entails the definition of both a problem and a solution situation.

Problems and solutions are, however, based on the perceptions of individuals. They are not objective conditions of the real world. They are subjective constructions—what Kenneth Boulding would call "images" of the real world—although such perceptions may be and often are shared in roughly the same form by many people (1956:16).[1] Nevertheless, problems may appear in different forms to different people. What is a critical problem for one person may appear unimportant, or even not a problem at all, to another person. To paraphrase Boulding, a problem is what somebody or something perceives as a problem; and, without somebody or something to perceive it, a problem is an absurdity.

Social problems, therefore, are what somebody or some organization perceives as problems. In turn, the nature of these problems is determined by the manner in which each is perceived. Thus, social problems may be perceived as having a single root cause or as being the product of many interrelated factors. On the one hand, poverty (for example) may be seen as the result of inadequate incomes (hence proposals for a guaranteed minimum income), delinquency as the result of broken homes, slums as caused by inadequate housing, unemployment as a lack of jobs, and so on.[2] On the other hand, social problems can be defined almost infinitely broadly. For example, the authors of a study of public housing projects in Chicago suggest that, conceivably, the way in which a single carpenter drives a single nail into a single house could be relevant to the problem of providing public housing (if, for example, certain union practices are sacrosant) (Meyerson and Banfield, 1965: preface). Obviously, neither kind of approach to defining a social problem is "right" and the other "wrong." Each is the result of a different perception of the problem.

Although no one perception of a social problem is inherently more correct than any other, the planner must still choose among them in deciding how broadly or how narrowly, how vaguely or how precisely, to define his problem. In making this decision, the planner will have many sources of advice. His clients, whether public servants, businessmen, or private citizens, may have one or several perceptions of the problem at issue. There may also be a different set of "popular" perceptions of the same problem. Moreover, any of these perceptions may change over time. Perceptions of poverty and pollution in North America, for example, have changed dramatically over the past decade or so. In Latin America, one observer has suggested that popular perceptions of social problems tend to pass through four distinct stages:

> (1) The problem does not exist subjectively. The problem exists but no one is preoccupied with it; no one pays much attention to those few who study it or try to arouse some interest in it.
>
> (2) Utopian proposals. Suddenly the problem projects itself into people's consciousness. People begin to talk about it; solutions are suggested, always radical, definitive, absolute and recognized as utopian even by those who advance them.
>
> (3) The utopia is converted into law. The solutions, somewhat mellowed, are accepted even by those opposed to them before. The problem seems so urgent that even utopian solutions seem possible and in the Spanish tradition the solution takes the shape of a law or of a constitutional text.
>
> (4) The reform of the reform. The law is not obeyed or else it is applied with excessive rigidity. Sometimes the law brings out new, unsuspected aspects of the problem. Here enters not the counter-reform but rather a reform of the reform, an adaptation of the principles to fit the reality in order better to change the latter. (Alba, 1961: 47–48)

Problems, in short, are not immutable in their nature, and the planner often retains a degree of discretion in deciding just what kind of problem he is trying to solve.

It is the contention of this paper that, while no one perception of a problem is more correct than another, some perceptions can be more *useful* than others for planning purposes. There are two principal reasons for this:

a. The way in which a problem is perceived determines the range of possible solutions to that problem.
b. The way in which a problem is perceived determines the kind of strategy that is appropriate for its solution.

For these reasons, the effective planner capitalizes on whatever discretion he may have in defining the problem he is to help solve.

PROBLEMS AND SOLUTIONS

That the perception of a problem implies a particular range of possible solutions to it appears intuitively obvious. If the problem of poverty (for example) is defined in terms of family income, then solutions to that problem must equally be capable of definition in terms of family income. Or, to give another example, the civil engineer faced with the problem of designing a high-speed urban roadway would never suppose that a solution to his problem might require taking into account, say, the training of future highway engineers—unless, of course, this factor had been perceived as part of the problem in the first place (as it might in a developing country, for instance). It seems, in short, that the definition of a problem specifies the nature of the possible solutions to it.

The nature of the relationship between problems and solutions is capable of more precise demonstration.[3] In the previous section, a problem and its solution were defined as different states of a single process, with the latter being in some sense a more desirable state than the former. Consider the simplest kind of social problem: for example, a house is said to be too small for a particular family. Suppose that the problem is perceived (defined) in terms of only two variables: the size of the house and the size of the family. Accordingly, the problem (denoted as P) can be expressed as a function (using the mathematical notation) of the size of the family (say, f) and the size of the house (say, h): viz.,

$$P = P(f, h).$$

This relationship is illustrated in more graphic terms in Figure 1, in which any point (such as P_1) indicates a specific housing situation in which a family of size f_1 lives in a house of size h_1. P_1 is a problem because, according to some criterion or set of criteria, the house is too small. For the present purposes, it is not necessary to specify the source of the criterion; it is illustrated in Figure 1 by the curve MN. Since P_1 lies above and to the left of MN, it is a problem situation.

There are two obvious solutions to this problem: give the house to a smaller family or find a larger house for the original family. (These two solutions could be illustrated by points S_1 and S_2 respectively in Figure 1.) Other solutions may also be possible, solutions reflecting changes in both variables at once. But the important thing is not how many solutions are possible but that, whatever solution may be adopted, it is going to be a function of family size and house size. The problem as it has been defined is not going to be solved by changing the income of the family or the quality of the house—unless these changes can in turn affect the defining variables of the problem. In short, the solution to a problem is, by definition, a preferred configuration of the same variables as are entailed in the problem itself.

To put this in more general terms, if any problem (P) is defined as

$$P = P(x_1, x_2, x_3, \ldots, x_n),$$

where x_n represents the nth variable in terms of which the problem is defined, then any solution (S) to that problem must similarly be capable of expression as

$$S = S(x_1, x_2, x_3, \ldots, x_n).$$

Thus, the way in which a problem is defined determines the nature of its solution. Or, as Herbert Simon (1962) has described it,

> Problem solving requires continual translation between the state and process descriptions of the same complex reality. Plato, in the *Meno,* argued that all learning is remembering. He could not otherwise explain how we can discover or recognize the answer to a problem unless we already know the answer. . . . We pose a problem by giving the state description of the solution. The task is to discover a sequence of processes that will produce the goal state [i.e., the solution] from an initial state [i.e., the problem].

This task will be examined in due course, but it is useful first to look at a typology of problems.

A TYPOLOGY OF PROBLEMS

Consider again the general definition of a problem proposed in the previous section. This formulation of a problem can be characterized in two fundamental ways: according to the number of variables entailed in the definition of the problem (i.e., the value of n), and according to the precision of each of those variables. First, the number of variables in the problem may be specified in its definition (i.e., n has a known value of five, ten, twenty, a hundred, a thousand, or some such finite number), or the number of variables

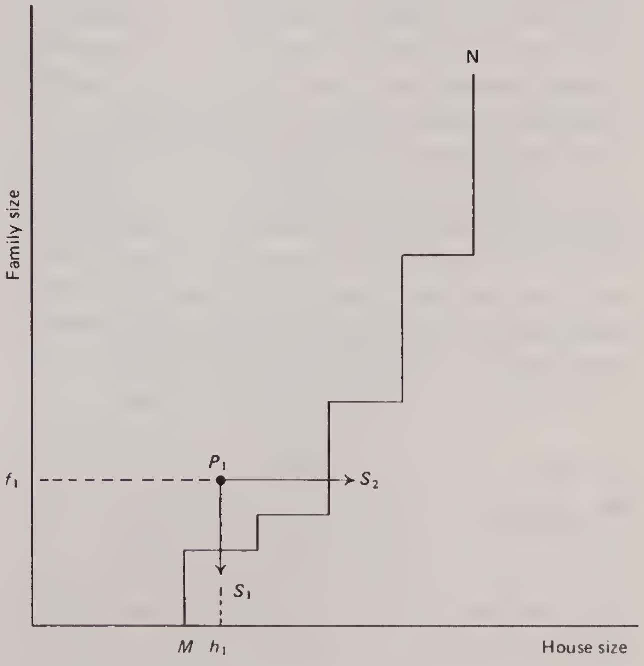


Figure 1 *Housing as a function of family size and house size.*

is not specified and the problem is defined as being open-ended (i.e., *n* has no fixed value). Second, the variables themselves may be either known or unknown —or, as will be said here, calculable or incalculable.[4] Accordingly, the general definition of a problem suggests two basic ways of classifying problems.

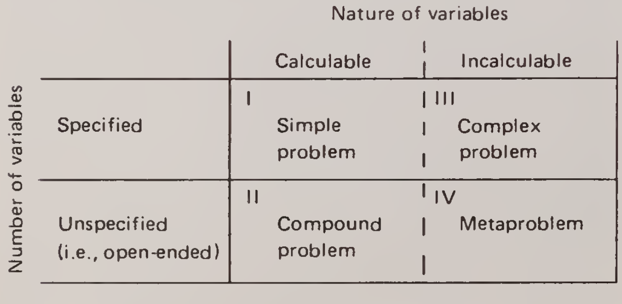
Putting these two distinctions together suggests four fundamentally different types of problems (see Figure 2). These four types may conveniently be termed:

I. simple problems,
II. compound problems,
III. complex problems, and
IV. metaproblems.

The names, however, are not so important as the distinctions they reflect.

Simple problems are problems which are completely understood: they are defined in terms of a specified number of calculable variables. It should be added that to denote a problem as simple (in the sense implied here) need have no bearing on how easy or how difficult it is to implement a solution to that problem. Unless implementation is explicitly defined as forming part of the problem—which it frequently is *not* in the case of problems defined in simple terms—the solution to a simple problem may turn out to be either relatively easy or relatively difficult to implement. The definition of a problem as a simple problem may or may not be appropriate in a given case; for example, a planner may decide that a simple definition of his problem is somewhat academic in circumstances where implementation is expected to be relatively difficult. But that is not the point here; the point is that a simple problem is one which, wisely or unwisely, is defined in terms that are finite and calculable.

Compound problems are problems some, but not all, of whose parts are known: they are defined in terms of an unspecified number of calculable variables. This means that a compound problem may consist in part of one or more simple problems, if it includes among its variables one or more subsets which can be defined as problems in their own right.



Number of variables	Nature of variables: Calculable	Nature of variables: Incalculable
Specified	I Simple problem	III Complex problem
Unspecified (i.e., open-ended)	II Compound problem	IV Metaproblem

Figure 2 *A topology of problems.*
Note: The significance of the dotted line is explained in the text.

Complex problems are problems which look like simple problems but are not: they are defined in terms of a specified number of variables, but the variables are incalculable rather than calculable.

Metaproblems, on the other hand, are the least precise of all: they are defined in terms of an unspecified number of incalculable variables.[5] In other words, a metaproblem acknowledges that a problem is perceived to exist and that some particular variables are involved in its definition; but precisely what these particular variables are and with what other variables they might be involved is not specified. Thus, a metaproblem is distinguished by its lack of precision.

In fact, the four types of problem represent varying degrees of precision, from the quite precise simple problem to the least precise metaproblem. But it should not be concluded from this that simple problems are better or more "scientific" than metaproblems. Precision of meaning in planning, as in other branches of science, can be functional or dysfunctional in different circumstances. As Abraham Kaplan has explained in his book on methodology in the behavioral sciences,

> The demand for exactness of meaning and for precise definition of terms can easily have a pernicious effect, as I believe it often has had in behavioral science. It results in what has been aptly named the *premature closure* of our ideas. That the progress of science is marked by successive closures can be stipulated; but it is just the function of inquiry to instruct us how and where closure can best be achieved.... That a cognitive situation is not as well structured as we would like does not imply that no inquiry made in that situation is really scientific. On the contrary, it is the dogmatisms outside science that proliferate closed systems of meaning; the scientist is in no hurry for closure. Tolerance of ambiguity is as important for creativity in science as it is anywhere else. (1964: 70–71)

Similarly, the planner may be best served by a precise definition of a problem in one case and an imprecise definition in another case.

In practice, of course, things may not work out as neatly as the previous paragraphs imply. For a problem may be defined as having some variables which are calculable and some which are incalculable. (Thus, in Figure 2, the line between calculable and incalculable variables is shown as a dotted line.) However, this fact does not invalidate the distinction in theory.[6] In practice, it is necessary merely to add a stipulation to the effect that the existence in the definition of a problem of at least one incalculable variable is sufficient to have the problem as a whole classified as a complex problem or as a metaproblem, as the case may be.

It may be useful to take a specific example again at this point: consider the problem of poverty. According to what has been suggested before, it should be possible to define poverty in four fundamentally different ways. One example of each different type of definition is as follows:

I. As a simple problem: poverty means having an annual income of less than three thousand dollars.
II. As a compound problem: poverty means having an annual income of less than three thousand dollars, having an education below the level of grade eight, living in substandard housing (according to some specific criteria), and/or other characteristics.
III. As a complex problem: poverty means the inability to obtain for oneself the minimum basic necessities of life (i.e., adequate food and shelter).
IV. As a metaproblem: poverty means relative social deprivation.

Of course, these are not the only definitions of poverty that can be proposed, tested, and found useful. The point is that each of the above definitions is possible and each illustrates one of the four different types of problems identified earlier in this section.

Consider more briefly another example: say, the construction of a highway through a city. As a matter of engineering, building the highway can be regarded as a simple problem (although not necessarily, of course, an easy problem to solve). If to this definition is added an unspecified number of other calculable variables (such as the taking of land, financing of the project, landscaping and maintenance of the highway, and so on), the problem becomes compound in nature. On the other hand, if the problem of constructing the highway is regarded as one of location and design, in which incalculable factors such as community participation are considered relevant, then the problem becomes complex. Finally, if all these factors (engineering, maintenance, location, design, and so on) as well as other factors related to an overall transportation policy for the city and region concerned are included in the definition of the problem, then the problem of constructing a highway can be defined as a metaproblem. Again, other definitions are possible; but the ones used here show how the "same" problem can be defined in four fundamentally different ways.

THE APPROPRIATENESS OF STRATEGY TO PROBLEM

Given this typology of problems, it becomes possible to deal with the basic proposition set out at the beginning of the paper: that the nature of a problem determines what is an appropriate strategy and, conversely, that the use of a particular strategy makes certain assumptions about the nature of the problem to which it is applied.

It will be recalled that planning was defined as deliberate intervention in some process; this, in turn, was held to imply the existence of a problem and a solution. For the purposes of this paper, a strategy is defined simply as a process of analysis and action leading to the determination of the deliberate intervention that constitutes the planning and ultimately transforms the problem into the solution. To quote Herbert Simon (1962) again, "Given a desired state of affairs and an existing state of affairs, the task . . . is to find the difference between these two states and then to find the correlating process that will erase the difference." It should be noted here that the nature of a problem may, of course, change over time; indeed, to induce such a change deliberately may form part of a planning strategy in a given case.

If planning strategies consist of analysis and action, then the central question posed in this paper can be rephrased in operational terms as follows: *Do the four fundamental types of problems identified earlier imply any special conditions for carrying out analysis and action and, if so, what are these conditions?*

One set of answers to these questions is given in Table 1. Essentially, the table shows that simple problems permit comprehensive analysis—and, therefore, maximization or optimization—but that the other three types of problems do not. Compound, complex, and metaproblems permit no more than varying degrees of less-than-comprehensive analysis and, therefore, various degrees of improvement or amelioration short of optimization.

Table 1 *Limits of Analysis and Action by Type of Problem*

Type of Problem	Limits of Analysis	Limits of Action
I. *Simple* (a specified number of calculable variables)	Complete understanding of all of the variables (comprehensive analysis)	Maximization or optimization
II. *Compound* (an unspecified number of calculable variables)	Complete understanding of some of the variables (in-depth analysis of subproblems)	Suboptimization (second best, "satisficing," etc.)
III. *Complex* (a specified number of incalculable variables)	Partial understanding of all of the variables (quick surveys)	Overall improvements (Pareto optima)
IV. *Metaproblem* (an unspecified number of incalculable variables)	Partial understanding of some of the variables (points of departure, benchmarks, etc.)	Partial improvements (Pareto "suboptima")

The reason for this is that a simple problem amounts to a closed system of information, and so it can be maximized or optimized. There are many techniques available to planners for this purpose, including some which can be programed for use with computers. None of the other three kinds of problems, however, is closed like a simple problem; so it cannot be optimized or maximized in the same way.

Because, therefore, a compound problem permits a complete understanding of only some of its variables, optimization is possible among only those variables which are completely understood. This process has been called by a variety of names, including suboptimization, "second best," and "*satisficing.*"[7]

In the case of complex problems, however, only a partial understanding of all the variables is possible; but the fact that all of the variables are known does mean that action can be directed at improvements in the whole situation and not just part of it. On the other hand, such overall improvements as may be possible will clearly not amount to optimization, since there is no possible way of knowing what is the optimum value of an incalculable variable. The most that can be said about the solution to a complex problem, therefore, is that it is better than the problem situation. Economists sometimes describe this kind of improvement as a "Pareto optimum," which is defined as a situation in which no one is any worse off and at least someone is better off than in some alternative situation.[8] Similarly, the solution to a complex problem may be a situation in which none of the defining variables is made worse and at least one of them is made better.

Not even this is possible in the case of metaproblems. For metaproblems yield only a partial understanding of only some of their component variables. Thus, where quick surveys (to identify all of the variables) were appropriate analytical techniques for complex problems, metaproblems warrant no more than the identification of points of departure or benchmarks.[9] Furthermore, without a definite knowledge of even the number (to say nothing of the nature) of the variables involved, it does not make sense to seek even an improvement (let alone an optimum) in the situation as a whole. The most that can be expected from the solution to a metaproblem is an improvement in some part of the situation—a condition which economists might be induced to call a "Pareto suboptimum"! It is impossible to foresee all the "side-effects" of trying to solve a metaproblem; hence, solving metaproblems is also likely to put a premium on experimentation and adaptability.[10]

It is perhaps open to question whether, under the circumstances described above, it makes very much sense to talk about the "solution" to a metaproblem or even to a compound or complex problem. Such problems obviusly cannot be "solved" in the same way that a simple problem can. The solution to a simple problem, in a sense, does away with or eliminates the problem; but this is clearly not the case with compound, complex, and metaproblems. Thus, it is sometimes argued that there is no solution to problems like poverty or pollution: the poor will always be with us, it is said; or, as long as there is man, there will be pollution. But this obviously does not mean that nothing can or should be done to improve the lot of the poor or to reduce the level of pollution. In fact, the difficulty is largely a semantic one. The practice in this paper has been to use the term "solution" to apply to any situation perceived as being more desirable than the problem to which it corresponds. The assumption in this paper is that any problem can be solved.

To summarize, therefore: *simple* problems are solved by comprehensive analysis and planned optimization; *compound* problems are solved by analyzing those parts of the problem which are amenable to analysis (i.e., the known calculable variables) and planning to optimize those parts; *complex* problems are solved by analyzing all the variables of the problem to the extent necessary to permit the planning of improvements in the situation as a whole; and *metaproblems* are solved by analyzing some of the variables to the extent that some improvements can be planned in some parts of the problem.

It should be noted that analysis governs action in the case of simple and compound problems, but that action governs analysis in the case of complex and metaproblems.

Finally, the terminology of David Braybrooke and Charles Lindblom suggests a still more concise summary (1963). Braybrooke and Lindblom describe a strategy called "disjointed incrementalism," which they present as an alternative to the traditional kind of "comprehensive rationalism." If "comprehensive rationalism" is taken to describe the kind of strategy appropriate for simple problems and if "disjointed incrementalism" is taken as a paradigm for the kind of strategy appropriate for metaproblems, then it is convenient to suggest that strategies appropriate for compound problems be described as "disjointed rationalism" and those appropriate for complex problems as "comprehensive incrementalism." This is summarized in Table 2, which should be compared with Table 1.

CONCLUSION

If true, the implications of all this are of not inconsiderable importance for both the planning theorist and the practicing planner. For what they suggest is that the definition of a problem is a vital part of the planning process. The planner may not always enjoy as much discretion in this respect as he might like; he may find that others (such as his clients or society at large) have already arrived at a fairly definite idea of the nature of a problem. He is, however, obliged to recognize that the way in which a problem is defined governs the kind of strategy which is appropriate for dealing with it.

Ignorance of this relationship may lead a planner into a position where there is a serious lack of "fit" between his problem and the strategy he is using on it. Thus, a planner may unwittingly find himself in the impossible position of trying to solve a problem he does not actually have.

For example, a planner may define (or have defined for him) a simple problem but be using a strategy appropriate for a metaproblem. As a result, his analysis is likely to be superficial and his proposals for action correspondingly facile. On the other hand, a planner may define (or have defined for him) a metaproblem but be using a strategy appropriate for a simple problem. As a result, his analysis is likely to be of limited value and his proposals for action correspondingly inadequate.

Ultimately, things may resolve themselves. Either the strategy will force a change in the problem, or the problem will force a change in the strategy. For example, persistent efforts to apply comprehensive rational strategies to a metaproblem will eventually reduce it to a simple problem—whether the planner intends it or not. Thus, insistence on a guaranteed annual income as the solution to the problem of poverty leads eventually to perceiving poverty as a simple problem of inadequate income. The fact that some people may still have no job, insufficient education and training, inadequate housing, and so on become separate (if no less important) problems.

Similarly, clinging to a metaproblem kind of definition will eventually force adoption of a strategy of disjointed incrementalism—whether the planner intends it or not. Thus, there is some evidence that the problem of pollution is having this sort of effect. Insistence on defining pollution in relation to economic progress and population growth, for example, makes traditional strategies of regulation and standards inadequate by themselves. New kinds of strategies are required.[11]

Table 2 *Problems and Strategies*

Type of Problem	Nature of Strategy Appropriate to Problem
Simple	Comprehensive and rational
Compound	Disjointed and rational
Complex	Comprehensive and incremental
Metaproblem	Disjointed and incremental

Either way, however, if the planner does not understand the kind of adjustments which are taking place between problems and strategies, he stands much less chance of being able to influence them in any effective way.

In fact, planning has for some time been faced with a cruel dilemma in this respect. On the one hand, there has been a growing willingness to perceive social, and especially urban, problems (such as poverty, pollution, housing, transportation, and others) as broader, more complicated, and more interrelated in their nature than was hitherto appreciated—in short, as being more complicated than just simple problems. On the other hand, planning techniques and strategies over the last few decades have improved far more rapidly and extensively in the opposite direction. In other words, planners have found themselves in the position of wanting to broaden many of their simple definitions of problems, yet relatively better and better able to solve the original simple types of problems.

Faced with this dilemma, practicing planners have had to avoid both the myopia of sticking to the old simple definitions of problems and using the new, more sophisticated techniques designed for them and the illusion of adopting the broader problem-definitions and then using the new techniques anyway.

But the dilemma persists. Is it preferable to have the wrong strategy for the right problem, or the right strategy for the wrong problem? Is it, to paraphrase Raymond Bauer (1966) talking about social indicators, better to have a crude and less-than-comprehensive strategy for the problem you are really interested in, or a precise and comprehensive strategy for a problem which is only an approximation of what you are interested in?

If the desirable problem-definition (say, a metaproblem) does not "fit" the desirable strategy (say, a comprehensive rational one), where should the planner give way? Should he accept a constraining of his problem (to suit the strategy) or should he be content with a less certain strategy (to suit the problem)?

There is, of course, no easy answer to this dilemma; yet practicing planners must make, and planning theorists must explain, everyday operational decisions about problems and strategies. Herein, perhaps, lies that part of planning which is more of an art than a science: knowing how best to define a problem given the trade-off with strategy.

But whether problem-definition is largely a matter for art or for science, its relationship to the choice of strategy should in any case be clearly understood in theory and consciously applied in practice. Not to do so is to risk, on the one hand, forcing problems to conform to the assumptions of a chosen strategy, and, on the other hand, wasting time and money looking for impossibly precise solutions instead of being content with "the art of the possible"—all of which is, in the final analysis, what planning is really all about.

• The author would like to express his gratitude to his colleagues, Professors Michel Chevalier and James Fenwick, who contributed to the development of these ideas in a joint course on planning theory at the Université de Montréal. Earlier versions of this paper were presented to the Regional Management Development Seminar of the Canadian Welfare Council in Lévis, Québec, in March 1969, and to the Transportation Planning Committee of the Roads and Transportation Association of Canada (R.T.A.C.) at a seminar in Toronto in April 1971.

1 See also David Lowenthal (1967).

2 For a concrete example, see the Moynihan Report on "The Negro Family: the Case for National Action," in Lee Rainwater and W. L. Yancey (1967).

3 There is an interesting parallel between the argument which follows and the attempts to design computerized general problem-solving programs for heuristic problems. See Allen Newell, J. C. Shaw and Herbert A. Simon (1959) and Simon and Newell (1962).

4 This second dichotomy is really the same as the first one but at a "lower" level, since each variable can itself be defined as a function of *n* subvariables of its own. On this basis, the calculability of each variable depends on *its n* having a specified value—just as was argued in the case of the first dichotomy. For this reason, the somewhat broader dimension of calculability is preferred to that of quantifiability, which implies that the variable must be capable of being measured according to some scale. A variable may be calculable, however, in the sense that all its elements are known, and yet not necessarily be quantifiable as well.

5 One of the leading proponents over the past several years of the term "metaproblem" has been Michel Chevalier; see his *Social Science and Water Management: a Planning Strategy* (1969). Chevalier also originated the calculable-incalculable distinction in this context.

6 Max Weber himself once pointed out, "If one perceives that concepts are primarily analytical instruments for the intellectual mastery of empirical data . . . , the fact that concepts . . . are ideal types will not cause him to desist from constructing them." E. A. Shils and H. A. Finch (1947): 106.

7 See, for example, H. A. Simon, *Models of Man, Social and Rational* (1957), Chaps. 14–16; and Kelvin Lancaster and R. G. Lipsey (1956–1957).

8 See, for example, I. M. D. Little, *A Critique of Welfare Economics* (1957) and Richard Zeckhauser and Elmer Schaefer (1968).

9 An interesting parallel to the difference between making quick surveys and finding benchmarks or points of departure may be found in the distinction between "simultaneous scanning" and "successive scanning", as described by J. S. Bruner et al. (1956).

10 One of the major proponents of experimentation and adaptability in an organizational context has been Warren Bennis; see, for example, his "Beyond Bureaucracy" (1965).

11 The effect of pollution problems in encouraging the development of new forms of planning strategies is described in Michel Chevalier and T. J. Cartwright (1972). "An Institutional Perspective of Environmental Perception: the Delaware Estuary Comprehensive Study," in W. R. D. Sewell and Ian Burton eds., *Perceptions and Attitudes in Resource Management* (Ottawa: Information Canada, 1972), Chap. 12.

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NOTES ON SOCIETAL ACTION

John Friedmann

The classical decision theory model is contrasted with an action-planning model in which planning and action are conceived as a single operation. Two types of societal action—system-maintaining and system-transforming—are identified together with their corresponding forms of planning. Criteria for evaluating societal guidance system performance are suggested, and improvement of the guidance system is presented as one of the most important missions for planning today. Personal characteristics that will permit the action-planner to use his technical competence effectively are enumerated: self-knowledge, high learning capacity, skill in the use of symbolic abstractions, empathy, ability to work in tense, conflict-charged situations, knowledge of the dynamics and uses of power, and an ethics of responsibility.

The idea that planning and implementation are two distinct and separable activities dies hard. Planning, it is said, leads to the formulation of plans; implementation is concerned with carrying them out. The intervening critical step is a decision. Planners prepare the plans and propose them to the relevant deciders who, after due deliberation, choose the alternative preferred by them and take measures that will make their choice effective. If plans fail to be implemented, it is because the deciders ignored the proposals made to them, preferring their own counsel.

The failure is seen to lie chiefly in the planners' inability to get through to authorities and to communicate persuasively the virtues and attractions of their plans. This was one of the conclusions at a recent conference of urban planners: [1] "The trouble is often not with the plans themselves but with lack of understanding and a clear lack of knowledge of appropriate channels of communication. Effective dialogue between the various types of planners and their clients does not exist." And the report continues: "Society has been planning too much and experiencing far too little application of plans—there is yet to be created a climate for the acceptance of plans. The problem of implementation is a crucial one."

Now it is frequently true that where planning and implementation are separated institutionally, the plans are shelved away. As Amitai Etzioni has observed, such planning "is likely to be an ineffectual base for societal guidance. *Its products are likely to be rejected, ignored, or radically altered by the political decision-makers,* and an attempt to implement plans produced in this way requires a large application of power and, thus, generates considerable resistance and alienation." [2]

The widespread notion that plans *ought* to get accepted and that when they are not, the failure is one of communication, rests on the technocratic fallacy that planners' proposals are inherently superior to actions that result from the un-aided decisions of non-planners. A recent survey, for instance, begins by describing some of the hoped-for results from the introduction of national planning to Latin America. There, planning was to be "the fundamental instrument for mobilizing national resources, bringing about necessary structural changes, enhancing efficiency and productivity, and securing more international financial cooperation." [3] Elaborate machineries for the production and implementation of plans were set up after 1961, but the original great hopes failed to be realized: [4]

> Recently, the planning process has been experiencing a period of stagnation, and in some cases can be seen to have lost ground. The impetus to prepare the over-all plans has spent itself, and the same fervour has not been applied to the tasks of translating over-all planning policy into specific economic policy programmes and short-term operational plans, and establishing efficient instruments for the periodic review and updating of plans and the evaluation of their implementation.

The argument is essentially similar to the one already quoted, referring to urban planning in the United States. Inherently "superior" plans are made but not effectuated because they are not properly communicated to those who have the power to decide.

But perhaps the real problem resides elsewhere. If the focus of planning is shifted from decisions to action, it is possible to assert that any action that is deliberate is also to a certain degree planned. The problem is no longer how to make decisions more "rational," but how to improve the *quality of the action.*

There is a good deal of evidence for the hypothesis

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that planning in its most generalized form is a ubiquitous activity, that all deliberate actions consider the value implications of choice, imply a knowledge of alternatives foregone, attempt to relate means to ends efficiently, and correct on-going actions on the basis of information about their results.[5] This may not always be done well, but it is done. A superabundance of plans is conceivable, but deliberate action without some kind of planning is not. Where deliberate action is taken with respect to society, or a major subsystem within it, we may refer to it as *societal action.*

The idea that planning and implementation are two distinct and separable activities dies hard.

Although any deliberate action may be said to have been planned to some degree, "planning" has been given a more precise meaning in contemporary usage. It refers specifically to the application of a scientific-technical intelligence in societal action. This specialized intelligence is further characterized by an approach that includes:

1. normative thinking, or a concern with values, aspirations, goals, and prescription;
2. analytical thinking, or a concern with the analysis of facts for policy prescription or program development;
3. futurist thinking, or a concern with the consequences of action and with the emergent future as posing alternative action possibilities in the present; and
4. strategic thinking, or a concern with actions that, intervening in a given process, will produce desired results with an economy of means.

Decision and Action Models of Planning

A scientific-technical intelligence of this type may be related to action in two ways. According to the classical *decision model* of the planning process, four distinct steps are involved: (1) preparation of alternative plans by planners; (2) adoption of one of these plans by deciders; (3) implementation of the chosen plan by administrators; and (4) recycling information concerning the results of implementation to planners who use this information to revise the current plan. It is this model which has caused the difficulties alluded to earlier. Plans are made, but the deciders proceed to actions that are not in accord with any of the plans proposed.

By contrast, the new approach which may be called the *action-planning model* fuses action and planning into a single operation so that the conceptual distinctions of planning-decision-implementation-recycling are washed out. This model is close to observable reality. In most situations, it is extremely difficult empirically to isolate the four phases of the classical model, particularly the critical step of decision-making.[6] An action will include deliberation and choice as pervasive, ongoing activities, but these are not to be identified as distinctive phases *prior* to action; they are—inseparably—a part of it.

In recent planning literature, there is a growing recognition that planning must move closer to action, but the vocabulary to describe events in terms of the new model has not yet been invented. The language used is frequently that inherited from the classical model. A United Nations Committee writes: [7]

> Effective plan implementation begins at the early stages of plan preparation. . . . Plan formulation is not an autonomous phase in planning. In a functioning planning system, *the distinction between plan formulation and plan implementation is more formal than real.* Planning takes place at all levels from the initial preparation of a general framework down to the planning for construction of a specific project. . . . A development plan is an instrument of action.

. . . the task of innovative planning is the institutionalization of functions, roles, frameworks, and performance programs that were not previously part of an organization's repertory.

It is still the old language, but the perspective is new: planning and action are brought together and fused. A similar idea is expressed in a management text for the U.S. Armed Forces: [8]

> The common denominator of all effective planning is that planning must be "actionable" and as such must be an integral part of an organization's decision-making and managerial processes. . . . What is still startling and uncomfortable to some is that in any dynamic situation planning must not be considered a "blue-print" of future operations.

In short, a radical reorientation of planning theory is possible if an action-planning model is substituted for the classical decision model.

Varieties of Societal Action

All societal actions are assumed to be deliberate. Planning in the narrow scientific-technical sense may or may not be present in those activities that make societal action deliberate. Where it is not, hunches, intuition, and experience are used as ready substitutes.

All societal actions may be grouped into two broad categories: those which are taken in order to maintain or improve an existing system of societal relationships and those which are taken in order to radically transform this system.

System-maintaining actions may be either *adaptive* or *developmental.* Both intend to accomplish their ends by nonviolent means within an accepted set of governing rules. Adaptive actions strive to maintain the equilibrium of a societal system in the face of changing external conditions or unforeseen internal changes. Developmental actions are concerned with changes that will propel a society toward new forms of self-realization. Such actions deliberately produce a disequilibrium in societal relations which must, however, be held within certain limits to prevent the system from disintegrating. Both forms of action are present in historical change, the one pressing relentlessly forward, the other endeavoring to keep the moving system from tearing apart. In this way, they may substantially modify a system of societal relations, but they will not break up the system to give it new form. They are not transforming actions since the institutional parameters of the system remain unaffected.[9]

. . . one of the key roles for societal guidance (and consequently for planning) is evaluation of society's overall performance and the inadequacies and failures of its guidance system.

Planning in the sense of a scientific-technical intelligence may be joined to both adaptive and developmental actions. In both cases, two forms of action planning may be identified. The first, *allocative planning,* is concerned with the formulation and application of criteria for distribution of resources among competing uses. The second, *innovative planning,* is concerned with the mobilization and organization of resources for a specific and new use. Or, to put it another way, the task of innovative planning is the institutionalization of functions, roles, frameworks, and performance programs that were not previously part of an organization's repertory.[10]

In contrast to system-maintaining actions which are pervasive, system-transforming actions occur only rarely in history. They appear when important social groups are no longer satisfied in their basic claims against those who hold power in society or when the adaptive capacity of a societal system to cope with external and internal changes is grossly insufficient. Disaffected groups will eventually challenge the legitimacy of rules by which society is governed and attempt to substitute for existing institutional bases a new set of rules that will fundamentally alter the relationships of power in society.

This model of system transformation is well described by Thomas S. Kuhn, who sees it as analogous to scientific revolutions. He writes: [11]

> Political revolutions aim to change political institutions in ways those institutions themselves prohibit. Their success therefore necessitates the partial relinquishment of one set of institutions in favor of another, and, in the interim, society is not fully governed by institutions at all. Initially it is crisis alone that attenuates the role of political institutions as . . . it attenuates the role of paradigms (in science). In increasing numbers, individuals become increasingly estranged from political life and behave more and more eccentrically within it. Then, as the crisis deepens, many of these individuals commit themselves to some concrete proposal for the reconstruction of society in a new institutional framework. . . . The parties to a revolutionary conflict must finally resort to the techniques of mass persuasion, often including force. Though revolutions have had a vital role in the evolution of political institutions, that role depends upon their being partially extrapolitical or extrainstitutional events.

Therefore, *revolutionary action* through which those who are excluded from effective power endeavor to seize it is system-transforming. Revolutionary actions, though they may be long in preparation, are short-lived and violent in execution. When successful, they impose a new orthodoxy that presumably will do greater justice to the previously neglected claims of the groups in whose name the revolution was made and will bring into existence a new system of societal relations that is more adapted to the demands of external and internal change than the preceding one.

We seem to be faced with rising disorder because of our collective inability to bring environmental "turbulence" under control.

A scientific-technical intelligence informed by modes of planning thought may also be used in revolutionary action. Revolutions do not "happen" without premeditation and preparation; like system-maintaining actions, they require an intelligentsia and technical planners. To distinguish planning that is joined to revolutionary action from adaptive and developmental planning, we shall refer to it as *counterplanning,* because it is directed against the dominant system of institutionalized power. Counterplanning is concerned with the ends and means of revolutionary action. Radical critiques of the existing societal order and proposals for its transformation are examples of counterplanning. So is critial counsel on how to accomplish the revolution. And so, finally, are manuals of guerrilla welfare.[12]

The preceding sketch of a typology of societal action and forms of planning may be summarized in tabular form (Table 1).

TABLE 1 *Types of Societal Action and Forms of Planning*

	Maintenance and improvement of society	Radical transformation of society
Types of societal action	1. Adaptive	1. Revolutionary
	2. Developmental	
Forms of action-planning	1. Allocative	1. Counterplanning
	2. Innovative	
Major characteristics of societal action	1. Reforming	1. Transforming
	2. Partial	2. Total
	3. Sustained	3. Short-lived
	4. Nonviolent	4. Violent
	5. Boundary-maintaining	5. Boundary-changing

In a given historical situation, all three types of societal action may be found. Except during periods of revolution, both allocative and innovative planning will coexist in various combinations. Once the revolution is accomplished, counterplanning will yield once more to planning for system maintenance and improvement. The role of counterplanning is limited to revolutionary action. It has no place in the new society.[13]

A Societal Guidance System

It would be wrong to regard societal action as the exclusive responsibility of a centralized agency. Typically, it involves many actors—individual or organized—performing many roles, some of which are related in complex ways to each other, while others are performed in relative isolation.

Each of these roles has a potential but limited capacity for influencing the course of societal change. This will be called its capacity for *societal guidance*. It is important to remember that societal guidance roles that are distributed among many actors do not have to be subsumed under a single set of societal objectives and consequently need not be subject to deliberate coordination.[14] Most commonly, in fact, they are uncoordinated in any formal sense. Wittingly or not, they contribute to the historical evolution of the societies on which they press a guiding influence.

Roles for societal guidance are most frequently embodied in organizations that are linked to each other in a distinctive pattern; this pattern may be called the *guidance system* of a society.[15]

The guidance system exerts a complex of multiple influences on the forces operative in society. In the narrower sense of public institutions that are part of a given guidance system, we may speak of these influences as "policy outcomes;" for the totality of the guidance system, we may call them "action outcomes." The way the guidance system is organized will tend to influence the range and direction of possible action outcomes.[16] It follows that innovative planning, by introducing changes into the guidance system of society—adding new component roles, altering the pattern of linkages joining the components, or improving the functioning of components—can permanently affect the range and direction of action outcomes in ways that are, in principle, predictable.[17]

The guidance system, therefore, has a decisive part in steering a society's trajectory of historical change, or its *performance*. By introducing innovative changes into the guidance system, the society's performance will also tend to be changed. This raises the question of whether a society's current performance is, in some fundamental sense, adequate. Innovative planning is appropriate for changing the structure and organization of the guidance system *only* if current performance is inadequate.

Three criteria may be suggested as relevant for evaluating societal performance. The first has to do with a society's ability to successfully adapt itself to external and internal changes; the second concerns the society's responsiveness to demands made upon it by different groups within it; and the third relates to the society's ability to conceive and carry out large-scale projects that transcend mere adaptability and are widely regarded as an "advance" or an "improvement." [18]

These criteria are not as precise as they should be, and their application to a concrete instance raises a hornet's nest of practical and philosophical problems. Still, they point in a direction that seems promising.

The relation of a guidance system to societal performance is mediated through communications. An analysis of this relationship in light of cybernetic theory may therefore turn out to suggest key areas for planned intervention in the guidance system. Karl Deutsch has proposed four quantitative factors that must be considered in such an analysis. He calls them *load, lag, gain,* and *lead*.[19]

Load is the amount of information generated by changes in a given system. *Lag* refers to the time it takes the guidance system to respond with adequate actions to new information. *Gain* is the amount of actual change in behavior that results from such actions, but a high rate of gain also increases the probability of what Deutsch calls *oversteering*. *Lead* is the distance of the accurately predicted position of a changing system from the actual position from which the most recent signals were received. It refers to the guidance system's ability to anticipate change.

Adequate societal performance is thus "inversely related to the amounts of *load* and *lag*. Up to a point, (it) may be positively related to the amount of *gain,* although at high rates of gain this relationship may be reversed; and (it is) always positively related to the amount of *lead*." [20]

Both sets of evaluative concepts—pertaining to societal performance and to the relationship between performance and guidance system—are useful and necessary for planning analysis where the issue at stake is not a particular policy, plan, or program but the adequacy of the guidance system itself through which a steady stream of these will be produced.

It is not clear what roles are essential components of societal guidance systems, but a partial list can be suggested as a first approximation. (See Table 2.) What concrete institutional forms these take and how they are related to each other must, of course, be separately determined in every situation. It is the simultaneous performance of these guidance roles, however, that produces the observed behavior of societal systems under determined conditions.

All these considerations lead to the single conclusion that one of the most critical tasks for societal guidance (and consequently for planning) is *evaluation of society's overall performance and the inadequacies and failures of its guidance system.* There is a school of thought which holds that this specific role must be entrusted to a central organ, a societal intelligence.[21] A contrasting concept holds that the center of societal intelligence may be dispersed and shifting. This needs to be explained.

There is first the immense complexity of analyzing and evaluating not only the performance of society but also the adequacy of the existing guidance system. It is difficult to conceive of this monumental task being carried out by a single central evaluator. Any evaluation of this sort involves subjective judgment. Since there is no one standard for such judgments, the need for many subjective viewpoints and their mutual confrontation is evident. Although no synthesis can be expected, the confrontation of opposed judgments may lead to a narrowing of possible interpretations, clarification of value positions, discovery of neglected aspects of the problem, modification of extreme opinions, and verification of the factual components of the evaluation. Finally, given the unbounded nature of reality, a global perspective on societal performance is impossible.[22]

TABLE 2 *Components of a Societal Guidance System*

Organizations for the performance of societal actions	Specific roles in societal guidance
1. Political and legal	a. Interest aggregation b. Formulation of purposes and goals c. Consensus formation d. Conflict resolution e. Resource allocation f. External relations to other systems.
2. Administrative	a. Routine (programmed) performance
3. Cognitive	a. Scientific and technological research b. Education and training c. Monitoring and information d. Social criticism e. Analysis and evaluation of system performance
4. Innovative	a. Idea generation b. System design (imaging) c. Strategy design d. Resource mobilization and management

All this leads to the conclusion that the only satisfactory way to approach a complete and "correct" evaluation of societal performance and guidance infrastructure is through a dispersal of societal intelligence. As one or the other of these focal points succeeds in polarizing the discussion, a *center* appears though it may not be centrally located with respect to the system nor exclude other centers that may compete with it for the attention of the relevant publics. Furthermore, the ability of a given center to polarize the discussion may be lost to other centers as new and competing views gain ascendancy or as new issues become paramount. It is in this sense that the center of societal intelligence may be said to be dispersed and shifting.

The results of evaluating societal performance may reveal inadequacies in the guidance system that need to be corrected. Indeed, the application of planning—innovative planning—to the improvement of guidance systems must be counted among the planning profession's most important missions. Creation of new organizations for guidance roles, improvement in the performance of existing roles, and their reorganization into more effective patterns would seem to take precedence over specific policy determinations and program formulations. For where the guidance system is itself inadequate, its "output" may be full of "errors" or in the language of communications theory, "noise." An effective guidance system must bear some meaningful relation to the demands made upon society by its environment and the "turbulence" brought about by its own actions.[23] Where this relation does not exist, social disorganization—entropy—will set in and slowly decompose the fabric of society.

Guidance systems are complex entities composed of many organized roles. Planners must first determine specific inadequacies in the existing system relative to societal performance and then attempt to mobilize resources for intervention in those places where the needs for corrective action are most urgent—the task is not a simple one.

An Active Society [24]

The situation in the world today poses with unusual clarity an issue on the relations of power. In terms of our earlier distinction, a society that is limited to purely adaptive actions is completely dependent on forces beyond its ability to control. We may call such a society *reactive*. A reactive society contrasts with one that is *active* and has a substantial capacity to pursue autonomously posited ends.

The United States has been called the world's "first new nation."[25] But, in fact, it may be more accurate to think of the United States as a hot house mutation which cannot be successfully imitated by any other country. With a population of over 200 million and a per capita income ten to fifteen times the average for the rest of the world, we have, consciously or not, reduced much of the world to a condition of dependency —culturally, politically, and economically—and thus to the status of largely reactive societies.[26] The external dependency of these societies is so great that many of them are unable to deal successfully with the pressures for change that are generated within their own boundaries by population increase, new aspirations, and accelerated urbanization. The consequent deterioration of internal order encourages revolutionary action.

In the United States a similar situation is encountered, though its origins are different. We seem to be faced with rising disorders because of our collective inability to bring environmental "turbulence" under control. Societal actions lead to unpredicted, negative consequences on such a scale that they tend to deny the effectiveness of individual effort. One result of this is that more and more people become alienated from the society. Meanwhile, the dominant groups are forced to react to rising revolutionary activity among the still dependent peripheral societies and to resort to bribery and force. But attempts to repress revolutions abroad not only drain off energies that otherwise might go towards constructive action at home, they also increase the possibilities of dominant groups applying domestic coercive measures in a desperate attempt to stave off further rises in social entropy. This situation, as in the dependent countries, favors the emergence of counterplanning and revolutionary action.

In action-planning . . . the planner moves to the foreground as a person . . . His success will in large measure depend on his skill in managing interpersonal relations.

Unless alienation is already so pervasive that major sectors have lost hope in the regenerative powers of American society, the challenge to planning should be clear. It is to undertake the *courageous and systematic evaluation of societal performance and to identify the strategic points for massive innovation in the guidance system.*

Training for Action-Planning

Where action and planning are fused, the role of the planner changes fundamentally. The planner formed in the image of the classical model was primarily a technician, an analyst, and a model-maker. Relatively isolated from the vital forces of change in society, he saw the world in symbolic abstractions such as figures, graphs, charts, and maps. Playing complicated games with these symbols, but obeying rules of logical and functional relationship, he could rearrange the world to suit his tastes and imagination. To be sure, external constraints in the form of political instructions or guidelines were usually imposed upon these games, but the planner's world was essentially one of symbols on which he worked in the air-conditioned austerity of his office. Occasionally, he would sally forth on expeditions to obtain data, but his contacts on the outside were limited. For every hour that he talked with outside people, he might spend nine hours talking to himself and other planners. The results of his work would be fixed in reports and more ambitious planning documents, and his hope was that these would be read and acted upon by relevant decisionmakers. His ethics forbid him to plead a particular view: he had to lay out the alternatives, describe their costs and benefits, and suggest the means by which alternatives might be attained.

This coolly rational and antiseptic role of the technocrat-planner is still remarkably prevalent. Albert Waterston, reporting on Iran, says:[27]

> . . . the head of the planning agency was primarily concerned with those tasks which required political contacts outside the planning agency. While he engaged in discussions with ministers, politicians, businessmen and other persons and groups outside the agency, a technician was in charge of the technical aspects of plan preparation and execution within the agency. In this way, the holder of the top job acted as a buffer for the technician against the shafts which ministers and other politicians regularly aimed at the planning agency.

In other words, the "real" planners were the technicians on the agency's staff, and their politically appointed head carefully shielded them from possible contamination by the world of action. A similar situation exists today in Chile and in many other countries where national planning has been introduced. Even in American city planning, Rabinovitz and Pottinger show that nearly one-third of the 201 planning directors they interviewed define their job mainly in technical terms; policy is for others to determine on the basis of information provided by planners.[28]

But a new breed of action planners, oriented to a different professional image, is moving forward. The new planner is brought close to the action—he wants to be involved.[29] His role is legitimated by a presumed technical competence, a characteristic that he shares with the "classical" planner of yesterday, but technical competence is nothing more than a condition for his participation in action; his effective contributions are not restricted to it. Action-planning is trans-technical.

To be involved in action is to interact with others who contribute skills and knowledge that are different from those of planners—such as politicians, administrators, influential persons, "gatekeepers," representatives of interest groups, technical staffs from competitive institutions, and many more. This cast of characters produces an "action." The planner is accepted or rejected by the cast as much for the person that he is and the manner in which he conducts himself as for the role assigned to him. In action-planning, then, the planner moves to the foreground as a person and autonomous agent. His success will in large measure depend on his skill in managing interpersonal relations.[30]

The implications of this reinterpretation of the planner's function are far-reaching for planning education. For now, in addition to acquiring technical and analytical sophistication, the planner must develop those abilities that will permit him to put his technical competence to effective use.

There exists no codified knowledge on what is required here, though we have models where interpersonal relations are found at the nub of the professional role. A case in point is psychiatry where the doctor-patient relationship is the key to a successful treatment. The analogy to the planner is an imperfect one, of course, but certain characteristics appear to be held in common.

The planner as actor would, first of all, seem to require a sharpened knowledge of himself, a heightened consciousness of the roles he will be asked to play, and a penetrating insight into his own biases, limitations, and strengths particularly as these reveal themselves in interpersonal situations. The planner should gain an understanding of how he appears to others.

By being involved in action, rather than standing apart from it, the planner will also have to increase his capacity for learning. While he brings a certain expertise to a given problem, his effectiveness will often depend on his ability to learn from others and from the situation itself, and to rapidly integrate this learning with the knowledge he already possesses. This implies a special attitude on his part, a willingness to learn, a humbleness when faced with new and possibly disconcerting facts, and a readiness to listen.

His expertise, moreover, depends on the skillful use that he makes of symbolic materials, especially statistics. This skill resides in large part in an ability to relate the symbol to the reality. What part of reality has dropped out, as it were, from the symbol, and what are the valid meanings remaining? The planner's view and assessment of a situation is conditioned by his reading of symbols; this contrasts with the experiential knowledge of those who form their ideas in direct encounters with reality. Awareness of this difference will influence the planner's ability to successfully communicate his thoughts to others.

This ability is closely related to a heightened capacity for empathy to see the world as others do. To move toward agreement on action often involves reducing the distances that separate the multiple perspectives on a given problem, discovering the common elements of view while respecting genuine differences. Ability to empathize can be learned; it requires keen observation, sharpened sensibility to the nuances of interpersonal relationships and to the psychological needs of others, and an authentic desire to understand points of view different from one's own.

No amount of empathy, however, can assure the absence of friction and clashes that result from differences in social position, interest, and interpretation. The typical action environment is tense and charged with conflict. Consequently the planner has to learn to live with conflict, to accept conflict as inevitable, and to exploit conflicting forces for constructive action. Only rarely will the planner have his way; he will have to bargain, compromise, and learn to accept defeat without being crushed by it.

Awareness of the inevitability and uses of conflict must be coupled with knowledge of the dynamics of power and the art of getting things done. Every action will meet the resistance of someone, but the fact of resistance is insufficient reason to abandon the action. Resistance can and, indeed, must be overcome if anything is to change at all. The action-planner cannot ignore the effect of his proposals on a given balance of power. Nor can he afford to ignore the instruments of power by which resistance can be broken down and an action accomplished. This calls for knowledge of the processes of politics, the bases of power, and the arts of persuasion.

Finally, if the planner enters the realm of action his word must be responsible. He is no longer setting forth alternatives, but advocating points of view that will affect the lives and well-being of others. His word is that of a professional, and his professional ethics must therefore include an injunction against irresponsibility. This is a question of conscience that each planner must settle for himself. In other professions, the criteria of responsibility are easier to determine: the bridge of the engineer must not collapse, the architect must satisfy his client, recovery of the patient is the tangible objective of the physician. Such easy measures of success or failure are generally not available to planners. The results of societal action are manifold. But difficulty of measurement should not be taken as a convenient escape from personal responsibility. It may be that no sanctions are taken in the case of failure, but the planner should act as if such sanctions would in fact be imposed. Only in this way can he ultimately hope to gain respect for himself as a person, as well as a professional.

. . . the planner has to learn to live with conflict . . . to bargain, compromise, and . . . accept defeat without being crushed by it.

NOTES

[1] "The Council of Urban Development Meeting, December 2–3, 1967," *The Institute of Human Sciences Review,* I, No. 1 (Winter 1967–1968), 8.

[2] Amitai Etzioni, *The Active Society—A Theory of Societal and Political Processes* (New York: The Free Press, 1968), p. 486. (Italics in the original.) I am heavily indebted to Etzioni's work, both for the conceptual scheme presented here and for the vocabulary used.

[3] United Nations, "Planning in Latin America," in *Economic Bulletin for Latin America,* XII, No. 2 (October 1967), 1.

[4] *Ibid.,* pp. 8–9.

[5] George A. Miller, Eugene Galanter, and Karl H. Pribam, *Plans and the Structure of Behavior* (New York: Henry Holt and Co., 1960).

[6] The pathos with which decision-making is commonly regarded in the literature is critically examined by Judith N. Shklar in her essay, "General Issues of Rational Decision," in Carl J. Friedrich (ed.), *Rational Decision,* Nomos Vol. VII, Yearbook of the American Society for Political and Legal Philosophy (New York: Atherton Press, 1964), pp. 3–17.

[7] "Planning and Plan Implementation in Latin America," in *Economic Bulletin for Latin America,* p. 19. (Italics added.)

[8] Raymond E. Kitchell, "Planning: A System for Action," in Fred R. Brown (ed.), *Management: Concepts and Practices* (Washington: GPO, 1967), p. 82. (Text edited for the Industrial College of the Armed Forces.)

[9] This distinction between system-maintaining and system-transforming actions leans heavily on the theory of scientific revolutions by Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962). According to Kuhn, "normal" science works within an established framework of theoretical assumptions (paradigm). After a certain time, however, this paradigm is put in doubt as questions are formulated which cannot be adequately solved within the context of "normal" science. Scientific endeavor then enters a period of crisis in which new and old paradigms compete for the attention and loyalty of scientists. As the new paradigm gains adherents, the old one is rapidly buried and forgotten, and a new "normal" science is born. The replacement of societal paradigms through revolutionary action is referred to here as system-transformation.

[10] The concepts of allocative and innovative planning and their relations to each other are more fully discussed in John Friedmann, "A Conceptual Model for the Analysis of Planning Behavior," *Administrative Science Quarterly,* XII, No. 2 (September 1967), 225–52.

[11] Thomas S. Kuhn, *The Structure of Scientific Revolutions,* pp. 92–3.

[12] By this definition, Leon Trotsky, Lenin, Herbert Marcuse, Daniel Cohn-Bendit, Stokely Carmichael, Frantz Fanon, Ernesto Guevara, and Michel Debray would all be considered counterplanners, though they might differ fundamentally among themselves in their ideological commitments. A manual, such as Che Guevara's *La Guerra de Guerrillas* (Habana: MINFAR, 1960), belongs to the same order of intellectual effort as a manual on program budgeting; both are planning documents of considerable practical importance.

[13] GOSPLAN replaces Trotsky. The curious and little understood case of Mao Tse Tung's "permanent revolution" which appears to institutionalize counterplanning remains still unaccounted for, however, though it is of the utmost theoretical significance (not to mention its practical consequences for the people of China).

[14] A model of "spontaneous" coordination of societal actions is detailed in Charles E. Lindblom, *The Intelligence of Democracy—Decision Making through Mutual Adjustment* (New York: The Free Press, 1965). A critique of this model (together with references to the relevant literature) is found in Amitai Etzioni, *The Active Society,* chap. 11.

[15] These patterns may be subsumed under alternative models of social organization. See, John Friedmann, "Bureaucratic and Innovative Models of Urban Life," A Paper presented at the meeting of the Latin American Studies Association, New York, November 8, 1968. (Mimeographed.) Also relevant here is Gideon Sjoberg, M. Donald Hancock, and Orion White, Jr., "Politics in the Post-Welfare State: A Comparison of the United States and Sweden" (The Carnegie Seminar on Political and Administrative Development, Department of Government, Indiana University, Bloomington, 1967). Recently, supporting empirical evidence has been forthcoming for these general models in a study of industrial management. See, Paul R. Lawrence and Jay W. Lorsch, *Organization and Environment—Managing Differentiation and Integration.* (Boston: Graduate School of Business Administration, Harvard University, 1967).

[16] Empirical evidence on the critical relation between the organization of guidance systems and societal performance is presented in Yong H. Cho, "The Effect of Local Government Systems on Local Policy Outcomes in the United States," *Public Administration Review,* XXVII, No. 1 (March 1967), 31–8; and in Ruth C. Young and José A. Moreno, "Economic Development and Social Rigidity: A Comparative Study of the Forty-Eight States," *Economic Development and Cultural Change,* XIII, No. 4, Part 1 (July 1965), 439–52.

[17] On the relationship between innovative planning and action outcomes, see, Alfred Diamant, "Innovation in Bureaucratic Institutions," *Public Administration Review,* XXVII, No. 1 (March 1967), 77–87. A contrasting view is taken by Thomas R. Dye, *Politics, Economics, and the Public. Policy Outcomes in the American States* (Chicago: Rand McNally and Company, 1966). Dye argues that policy outcomes are chiefly determined by prevailing conditions of economic development. He attributes little importance to the organization of the political system as a determinant of policies. His analysis, however, is static. He does not study the feedback relationship of policy outcomes on economic development (though this relationship is formally included in his model). Had these been taken into account, it is probable that his conclusions would have been radically different. If a major change in the level of economic development is desired, the political system, as part of the more general guidance system of society, will need to be changed. This, of course, has been the traditional position of political reformers whom Dye, in his book, endeavors to prove wrong.

[18] The first steps toward an analysis and evaluation of societal performance have been taken in the pathbreaking work edited by Raymond A. Bauer, *Social Indicators* (Cambridge, Mass.: MIT Press, 1966).

[19] Karl W. Deutsch, *The Nerves of Government. Models of Political Communication and Control* (New York: The Free Press, 1963), pp. 187–90.

[20] *Ibid.,* 188–9.

[21] Rexford G. Tugwell, "The Study of Planning as a Scientific Endeavor," in Michigan Academy of Science, *Report for 1948,* pp. 34–48. See also, John Friedmann, "Planning as a Vocation," Part I, *Plan* (Canada), VI, No. 3 (1966), 99–124. It might be added that practically all discussions of planning, with the exception of advocacy planning, turn on the issue of *central* planning.

[22] The philosophical basis for this assertion is discussed in Karl Jaspers, *Von der Wahrheit*—Erster Teil der Philosophischen Logik (2nd. ed., Muenchen: S. R. Piper and Co., 1947). And, by the same author, *Einfuehrung in die Philosophie* (Muenchen: S. R. Piper and Co., 1950).

[23] The concept of "environmental turbulence" has been introduced by F. E. Emery, "The Next Thirty Years: Concepts, Methods, and Anticipations," *Human Relations,* XX, No. 3 (1967), 199–237. Turbulent environments may be regarded as complex and rapidly changing fields of interaction in which the participant actors produce unforeseen negative consequences for themselves.

[24] The title of this section is taken from Amitai Etzioni's book of the same name. See note 2. The analysis, however, is my own.

[25] Seymour Martin Lipset, *The First New Nation* (New York: Basic Books. 1964).

[26] The concept of "dependency" has been made the basis of modern radical analysis of the condition of underdevelopment, especially in Latin America. See, for instance, Osvaldo Sunkel, "Política Nacional de Desarrollo y Dependencia Externa." *Estudios Internacionales* (Santiago de Chile), I, No. 1 (April 1967), 43–75; Aníbal Quijano, "Dependencia,, cambio social, y urbanización en Latinoamérica." *Cuadernos de Desarrollo Urbano-Regional* (Universidad Católica de Chile, Centro Interdisciplinario de Desarrollo Urbano y Regional, Santiago de Chile), No. 6 (March 1968), pp. 3–48; Aníbal Pinto, "La 'crisis lationamericana' y su marco externo," in *Política y Desarrollo* (Santiago: Editorial Universitaria, S.A., 1968), pp. 87–119.

[27] Albert Waterston, *Development Planning—Lessons of Experience* (Baltimore: The Johns Hopkins Press, 1965), p. 512.

[28] Francine F. Rabinovitz and J. Stanley Pottinger, "Organization for Local Planning: The Attitudes of Directors," *Journal of the American Institute of Planners,* XXXIII, No. 1 (January 1967), Table I, p. 28.

[29] I am indebted for many insights on the role of planners in an active society to discussions with Dr. Sharon Kaufman.

[30] This conclusion is implicit in all discussions on "advocacy planning." See especially, Lisa R. Peattie, "Reflections of Advocacy Planning," *Journal of the American Institute of Planners,* XXXIV, No. 2 (March 1968), 80–7.

The Plight and a Step Forward

The Plight

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Thirty years ago the wilderness of Scotland looked inviolate to me and I would have been content to give my life to the creation of oases of delight in the heart of Glasgow or dream of a marriage of man and nature in new cities and towns. My boyhood sense of the rest of the world suggested that it was even wilder than Scotland. There were still explorers in those days and missionaries enough to build a stamp collection from their solicitations. The plight that moved me then was little enough compared to today. Then there was no threat of an atomic holocaust and no fear of radiation hazard. The population problem was one of declining birthrates and Mussolini exhorted and coerced Italian mothers to greater efforts while Presidents of France deplored an effete generation. DDT and Dieldrin were not yet festering thoughts; penicillin and streptomycin were not yet hopes. Man's inhumanity to man was commonplace in distant lands but had not achieved the pinnacle of depravity which at Belsen and Dachau a civilized nation was to achieve. Poverty and oppression were real and pervasive, and war was imminent enough so that I could conclude at seventeen that I had better be ready as a trained soldier by 1939.

Yet while the city was grim indeed, the countryside could be reached by foot, by bicycle or even for the few pennies that led to a tram terminus and the gateway to wild lands where no law of trespass constrained.

The country is not a remedy for the industrial city, but it does offer surcease and some balm to the spirit. Indeed, during the Depression there were many young men who would not submit to the indignity of the dole or its queues and who chose to live off the land, selling their strength where they could for food and poaching when they could not, sleeping in the bracken or a shepherd's bothy in good weather, living in hostels and public libraries in winter. They found independence, came to know the land and live from it, and sustained their spirit.

So, when first I encountered the problem of the place of nature in man's world it was not a beleaguered nature, but merely the local deprivation that was the industrial city. Scotland was wild enough, protected by those great conservators, poverty and inaccessibility. But this has changed dramatically in the intervening decades, so that today in Europe and the United States a great erosion has been accomplished which has diminished nature—not only in the countryside at large, but within the enlarging cities and, not least, in man as a natural being.

There are large numbers of urban poor for whom the countryside is known only as the backdrop to westerns or television advertisements. Paul Goodman speaks of poor children who would not eat carrots pulled from the ground because they were dirty, terror-stricken at the sight of a cow, who screamed in fear during a thunderstorm. The Army regularly absorbs young men who have not the faintest conception of living off the land, who know nothing of nature and its processes. In classical times the barbarians in fields and forest could only say "bar bar" like sheep; today their barbaric, sheepish descendants are asphalt men.

Clearly the problem of man and nature is not one of providing a decorative background for the human play, or even ameliorating the grim city: it is the necessity of sustaining nature as source of life, milieu, teacher, sanctum, challenge and, most of all, of rediscovering nature's corollary of the unknown in the self, the source of meaning.

There are still great realms of empty ocean, deserts reaching to the curvature of the earth, silent, ancient forests and rocky coasts, glaciers and volcanoes, but what will we do with them? There are rich contented farms, and idyllic villages, strong barns and white-steepled churches, tree-lined streets and covered bridges, but these are residues of another time. There are, too, the silhouettes of all the Manhattans, great and small, the gleaming golden windows of corporate images—expressionless prisms suddenly menaced by another of our creations, the supersonic transport whose sonic boom may reduce this image to a sea of shattered glass.

But what do we say now, with our acts in city and countryside? While I first addressed this question to Scotland in my youth, today the world directs the same question to the United States. What is our performance and example? What are the visible testaments to the American mercantile creed—the hamburger stand, gas station, diner, the ubiquitous billboards, sagging wires, the parking lot, car cemetery and that most complete conjunction of land rapacity and human disillusion, the subdivision. It is all but impossible to avoid the highway out of town, for here, arrayed in all its glory, is the quintessence of vulgarity, bedecked to give the maximum visibility to the least of our accomplishments.

And what of the cities? Think of the imprisoning gray areas that encircle the center. From here the sad suburb is an unrealizable dream. Call them no-place although they have many names. Race and hate, disease, poverty, rancor and despair, urine and spit live here in the shadows. United in poverty and ugliness, their symbol is the abandoned carcasses of automobiles, broken glass, alleys of rubbish and garbage. Crime consorts with disease, group fights group, the only emancipation is the parked car.

What of the heart of the city, where the gleaming towers rise from the dirty skirts of poverty? Is it like midtown Manhattan where twenty per cent of the population was found to be indistinguishable from the patients in mental hospitals?* Both stimulus and stress live here with the bitch goddess success. As you look at the faceless prisms do you recognize the home of *anomie?*

Can you find the river that first made the city? Look behind the unkempt industry, cross the grassy railroad tracks and you will find the rotting piers and there is the great river, scummy and brown, wastes and sewage bobbing easily up and down with the tide, endlessly renewed.

If you fly to the city by day you will see it first as a smudge of smoke on the horizon. As you approach, the outlines of its towers will be revealed as soft silhouettes in the hazardous haze. Nearer you will perceive conspicuous plumes which, you learn, belong to the proudest names in industry. Our products are household words but it is clear

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*Srole, Leo, *et al.*, ***Mental Health in the Metropolis: The Midtown Manhattan Study***. New York, McGraw-Hill, 1962.

that our industries are not yet housebroken. Drive from the airport through the banks of gas storage tanks and the interminable refineries. Consider how dangerous they are, see their cynical spume, observe their ugliness. Refine they may, but refined they are not.

You will drive on an expressway, a clumsy concrete form, untouched by either humanity or art, testament to the sad illusion that there can be a solution for the unbridled automobile. It is ironic that this greatest public investment in cities has also financed their conquest. See the scars of the battle in the remorseless carving, the dismembered neighborhoods, the despoiled parks. Manufacturers are producing automobiles faster than babies are being born. Think of the depredations yet to be accomplished by myopic highway builders to accommodate these toxic vehicles. You have plenty of time to consider in the long peak hour pauses of spasmodic driving in the blue gas corridors.

You leave the city and turn towards the countryside. But can you find it? To do so you will follow the paths of those who tried before you. Many stayed to build. But those who did so first are now deeply embedded in the fabric of the city. So as you go you transect the rings of the thwarted and disillusioned who are encapsulated in the city as nature endlessly eludes pursuit.

You can tell when you have reached the edge of the countryside for there are many emblems—the cadavers of old trees piled in untidy heaps at the edge of the razed deserts, the magnificent machines for land despoliation, for felling forests, filling marshes, culverting streams, and sterilizing farmland, making thick brown sediments of the creeks.

Is this the countryside, the green belt—or rather the greed belt, where the farmer sells land rather than crops, where the developer takes the public resource of the city's hinterland and subdivides to create a private profit and a public cost? Certainly here is the area where public powers are weakest—either absent or elastic—where the future costs of streets, sidewalks and sewers, schools, police and fire protection are unspoken. Here are the meek mulcted, the refugees thwarted.

Rural land persists around the metropolis, not because we have managed the land more wisely but because it is larger, more resistant to man's smear, more resilient. Nature regenerates faster in the country than in the city where the marks of men are well-nigh irreversible. But it still wears the imprint of man's toil. DDT is in the arctic ice, in the ocean deeps, in the rivers and on the land, atomic wastes rest on the Continental Shelf, many creatures are forever extinguished, the primeval forests have all but gone and only the uninitiated imagine that these third and fourth growth stands are more than shadows of their forebears. Although we can still see great fat farms, their once deep soils, a geological resource, are thinner now, and we might well know that farming is another kind of mining, dissipating the substance of aeons of summers and multitudes of life. The Mississippi is engorged with five cubic miles of soil each year, a mammoth prodigality in a starving world. Lake Erie is on the verge of becoming septic, New York City suffers from water shortages while the Hudson flows foully past, salt water encroaches in the Delaware, floods alternate with drought, the fruits of two centuries of land mismanagement. Forest fires, mudslides and smog become a way of life in Los Angeles, and the San Andreas Fault rises in temperature to menace San Franciscans.

The maps all show the continent to be green wild landscapes save for the sepia cities huddled on lakes and seaboards, but look from a plane as it crosses the continent and makes an idiocy of distance, see the wild green sectioned as rigorously as the city. In the great plains nature persists only in the meandering stream and the flood plain forest, a meaningful geometry in the Mondriaan patterns of unknowing men.

It matters not if you choose to proceed to the next city or return to the first. You can confirm an urban destination from the increased shrillness of the neon shills, the diminished horizon, the loss of nature's companions until you are alone, with men, in the heart of the city, God's Junkyard—or should it be called Bedlam, for cacophony lives here. It is the expression of the inalienable right to create ugliness and disorder for private greed, the maximum expression of man's inhumanity to man. And so our cities grow, coalescing into a continental necklace of megalopoles, dead gray tissue encircling the nation.

Surely the indictment is too severe—there must be redeeming buildings, spaces, places, landscapes. Of course there are—random chance alone would have ensured some successful accidents. But there are also positive affirmations, yet it is important to recognize that many of these are bequests from earlier times. Independence, Carpenter and Faneuil Hall symbolize the small but precious heritage of the 18th century: the great State Houses, city halls, museums, concert halls, city universities and churches, the great urban park systems, were products of the last century. Here in these older areas you will find humane, generous suburbs where spacious men built their concern into houses and spaces so that dignity and peace, safety and quiet live there, shaded by old trees, warmed by neighborliness.

You may also see hints of a new vitality and new forms in the cities, promising resurgence. You may even have found, although I have not, an expressway that gives structure to a city, or, as I have, a parkway that both reveals and enhances the landscape. There are farmlands in good heart; there are landowners—few it is true—who have decided that growth is inevitable, but that it need not lead to despoliation but to enlargement. New towns are being constructed and concepts of regional planning are beginning to emerge. There is an increased awareness for the need to manage resources and even a title for this concern—The New Conservation. There is a widening certainty that the Gross National Product does not measure health or happiness, dignity, compassion, beauty or delight, and that these are, if not all inalienable rights, at least most worthy aspirations.

But these are rare among the countless city slums and scabrous towns, pathetic subdivisions, derelict industries, raped land, befouled rivers and filthy air.

At the time of the founding of the republic—and for millennia before—the city had been considered the inevitable residence for the urbane, civilized and polite. Indeed all of these names *say* city. It was as widely believed that rich countries and empires were inevitably built upon the wealth of the land. The original cities and towns of the American 18th century were admirable—Charleston and Savannah, Williamsburg, Boston, Philadelphia, New Orleans. The land was rich and beautiful, canons of taste espoused the 18th-century forms of architecture and town building, a wonder of humanity and elegance.

How then did our plight come to be and what can be done about it? It is a long story which must be told briefly and, for that reason, it is necessary to use a broad brush and paint with coarse strokes. This method inevitably offends for it omits qualifying statements, employs broad generalities and often extrapolates from too slender evidence. Yet the basic question is so broad that one need not be concerned with niceties. The United States is the stage on which great populations have achieved emancipation from oppression, slavery, peonage and serfdom, where a heterogeneity of peoples has become one and where an unparalleled wealth has been widely distributed. These are the jewels of the American diadem. But the setting, the environment of this most successful social revolution, is a major indictment against the United States and a threat to her success and continued evolution.

Our failure is that of the Western World and lies in prevailing values. Show me a man-oriented society in which it is believed that reality exists only because man can perceive it, that the cosmos is a structure erected to support man on its pinnacle, that man exclusively is divine and given dominion over all things, indeed that God is made in the image of man, and I will predict the nature of its cities and their landscapes. I need not look far for we have seen them—the hot-dog stands, the neon shill, the ticky-tacky houses, dysgenic city and mined landscapes. This is the image of the anthropomorphic, anthropocentric man; he seeks not unity with nature but conquest. Yet unity he finally finds, but only when his arrogance and ignorance are stilled and he lies dead under the greensward. We need this unity to survive.

Among us it is widely believed that the world consists solely of a dialogue between men, or men and God, while nature is a faintly decorative backdrop to the human play. If nature receives attention, then it is only for the purpose of conquest, or even better, exploitation—for the latter not only accomplishes the first objective, but provides a financial reward for the conqueror.

We have but one explicit model of the world and that is built upon economics. The present face of the land of the free is its clearest testimony, even as the Gross National Product is the proof of its success. Money is our measure, convenience is its cohort, the short term is its span, and the devil may take the hindmost is the morality.

Perhaps there is a time and place for everything; and, with wars and revolutions, with the opening and development of continents, the major purposes of exploration and settlement override all lesser concerns and one concludes in favor of the enterprises while regretting the wastages and losses which are incurred in these extreme events. But if this was once acceptable as the inevitable way, that time has passed.

The pioneers, the builders of railroads and canals, the great industrialists who built the foundations for future growth were hard-driven, single-minded men. Like soldiers and revolutionaries, they destroyed much in disdain and in ignorance, but there are fruits from their energies and we share them today. Their successors, the merchants, are a different breed, more obsequious and insidious. The shock of the assassination of a President stilled for only one day their wheedling and coercive blandishments for our money. It is their ethos, with our consent, that sustains the slumlord and the land rapist, the polluters of rivers and atmosphere. In the name of profit they preempt the seashore and sterilize the landscape, fell the great forests, fill the protective marshes, build cynically in the flood plain. It is the claim of convenience for commerce—or its illusion—that drives the expressway through neighborhoods, homes and priceless parks, a taximeter of indifferent greed. Only the merchant's creed can justify the slum as a sound investment or offer tomato stakes as the highest utility for the priceless and irreplaceable redwoods.

The economists, with a few exceptions, are the merchants' minions and together they ask with the most barefaced effrontery that we accommodate our value system to theirs. Neither love nor compassion, health nor beauty, dignity nor freedom, grace nor delight are important unless they can be priced. If they are non-price benefits or costs they are relegated to inconsequence. The economic model proceeds inexorably towards its self-fulfillment of more and more despoliation, uglification and inhibition to life, all in the name of progress—yet, paradoxically, the components which the model excludes are the most important human ambitions and accomplishments and the requirements for survival.

The origins of societies and of exchange go back to an early world when man was a minor inconsequence in the face of an overwhelming nature. He bartered his surpluses of food and hides, cattle, sheep and goats and valued scarcities, gold and silver, myrrh and frankincense. But the indispensable elements of life and survival were beyond his ken and control: they could not and did not enter his value system save imperfectly, through religious views. Nor have they yet. But in the intervening millennia the valuations attributed to commodities have increased in range and precision and the understanding of the operation of the limited sphere of economics has increased dramatically. This imperfect view of the world as commodity fails to evaluate and incorporate physical and biological processes: we have lost the empirical knowledge of our ancestors. We are now unable to attribute value to indispensable natural processes, but we have developed an astonishing precision for ephemera.

It is obvious that such an institutionalized myopic prejudice will exclude the realities of the biophysical world. Its very man-centeredness ensures that those processes, essential to man's evolution and survival, will be excluded from consideration and from evaluation. We have no thought in the interminable dialogues among men for the sustaining sun, the moon and tides, the oceans and hydrologic cycle, the inclined axis of the earth and the seasons. As a society we neither know nor value the chemical elements and compounds that constitute life, and their cycles, the importance of the photosynthetic plant, the essential decomposers, the ecosystems, their constituent organisms, their roles and cooperative mechanisms, the prodigality of life forms, or even that greatest of values, the genetic pool with which we confront the future.

Yet we may soon learn. Consider the moon. It apparently lacks an atmosphere and oceans and the great inheritance of life forms which we enjoy. The costs of "terra-farming" this naked, hostile planet to that benign condition which can support life as abundantly as does the earth are considered of such a magnitude as to be inconceivable. Colonies on the moon will thus have to be small envelopes enclosing some of the essential commonplaces of earth transported as priceless and indispensable commodities. The man on the moon will know the value of these things.

But surely we need not await the confrontation with the inhospitable moon to learn a lesson so rudimentary, so well known to our ancient ancestors and as familiar to the simple societies of the world today.

Economic determinism as an imperfect evaluation of the biophysical world is only one of the consequences of our inheritance. An even more serious deficiency is the attitude towards nature and man which developed from the same source and of which our economic model is only one manifestation. The early men who were our ancestors wielded much the same scale of power over nature which Australian aboriginals do today. They were generally pantheists, animatists or animists. They tried to understand the phenomenal world and through behavior, placation and sacrifice, diminish adversity and increase beneficence. This early empiricism remains a *modus vivendi* for many tribal peoples, notably the American Indian—and conspicuously the Pueblo—today.

Whatever the earliest roots of the western attitude to nature it is clear that they were confirmed in Judaism. The emergence of monotheism had as its corollary the rejection of nature; the affirmation of Jehovah, the God in whose image man was made, was also a declaration of war on nature.

The great western religions born of monotheism have been the major source of our moral attitudes. It is from them that we have developed the preoccupation with the uniqueness of man, with justice and compassion. On the subject of man-nature, however, the Biblical creation story of the first chapter of Genesis, the source of the most generally accepted description of man's role and powers, not only fails to correspond to reality as we observe it, but in its insistence upon dominion and subjugation of nature, encourages the most exploitative and destructive instincts in man rather than those that are deferential and creative. Indeed, if one seeks license for those who would increase radioactivity, create canals and harbors with atomic bombs, employ poisons without constraint, or give consent to the bulldozer mentality, there could be no better injunction than this text. Here can be found the sanction and injunction to conquer nature—the enemy, the threat to Jehovah.

The creation story in Judaism was absorbed unchanged into Christianity. It emphasized the exclusive divinity of man, his God-given dominion over all things and licensed him to subdue the earth. While Abraham Heschel, Gustave Weigel, and Paul Tillich, speaking for Judaism and Christianity, reject the literality of this view and insist that it is an allegory, it is abundantly clear that it is the literal belief that has and does permeate the western view of nature and man. When this is understood, the conquest, the depredations and the despoliation are comprehensible, as is the imperfect value system.

From early, faintly ridiculous beginnings when a few inconsequential men proclaimed their absolute supremacy to an unhearing and uncaring world, this theme has grown. It had only a modest place in classical Greece, where it was tempered by a parallel pantheism. It enlarged during the Roman tenure but was also subject to the same constraints. When the Millennium passed without punishment it grew more confident. In the Humanism of the Renaissance it made a gigantic leap and it is somewhat poignant that the poverty of the Mediterranean today is a product of the land mismanagement that occurred during this great inflation of the human ego and the increase of man's powers over nature. The 18th century was a period of pause—the Naturalist view emerged—but it barely arrested the anthropomorphic, anthropocentric surge that swelled in the 19th century and is our full-blown inheritance today.

The Inquisition was so outraged by doubt cast upon the primacy of man and his planet that Galileo was required to rescind his certainty that the earth revolved around the sun. This same insistence upon human divinity takes hard the evidence of man's animal ancestry or indeed the history of evolution. It looks as if it will resist the evidence that man's pre-hominid ancestors might well have been feral killers whose evolutionary success can be attributed to this capacity.

If the highest values in a culture insist that man must subdue the earth and that this is his moral duty, it is certain that he will in time acquire the powers to accomplish that injunction. It is not that man has produced evidence for his exclusive divinity, but only that he has developed those powers that permit the fulfillment of his aggressive destructive dreams. He now can extirpate great realms of life: he is the single agent of evolutionary regression.

In times long past, when man represented no significant power to change nature, it mattered little to the world what views he held.

Today, when he has emerged as potentially the most destructive force in nature and its greatest exploiter, it matters very much indeed. One looks to see whether with the acquisition of knowledge and powers the western attitudes to nature and to man in nature have changed. But for all of modern science it is still pre-Copernican man whom we confront. He retains the same implicit view of exclusive divinity, man apart from nature, dominant, exhorted to subdue the earth—be he Jew, Christian or agnostic.

Yet surely this is an ancient deformity, an old bile of vengeance that we can no longer tolerate. This view neither approximates reality nor does it help us towards our objectives of survival and evolution. One longs for a world psychiatrist who could assure the patient that expressions of his cultural inferiority are no longer necessary or appropriate. Man is now emancipated, he can stand erect among the creatures. His ancient vengeance, a product of his resentment at an earlier insignificance, is obsolete. The exercise of his great destructive powers are less worthy of adulation than creative skills, but they are enough for the moment to assuage the yearnings for primacy so long denied. From his position of destructive eminence he can now look to his mute partners and determine who they are, what they are, what they do, and realistically appraise the system within which he lives—his role, his dependencies—and reconstitute a cosmography that better accords with the world he experiences and which sustains him.

For me the indictment of city, suburb, and countryside becomes comprehensible in terms of the attitudes to nature that society has and does espouse. These environmental degradations are the inevitable consequence of such views. It is not incongruous but inevitable that the most beautiful landscapes and the richest farmlands should be less highly valued than the most scabrous slum and loathsome roadside stand. Inevitably an anthropocentric society will choose tomato stakes as a higher utility than the priceless and irreplaceable redwoods they have supplanted.

Where you find a people who believe that man and nature are indivisible, and that survival and health are contingent upon an understanding of nature and her processes, these societies will be very different from ours, as will be their towns, cities and landscapes. The hydraulic civilizations, the good farmer through time, the vernacular city builders have all displayed this acuity. But it is in the traditional society of Japan that the full integration of this view is revealed. That people, as we know, has absorbed a little of the best of the West and much of the worst while relinquishing accomplishments that we have not yet attained and can only envy.

In that culture there was sustained an agriculture at once incredibly productive and beautiful, testimony to an astonishing acuity to nature. This perception is reflected in a language rich in descriptive power in which the nuances of natural processes, the tilth of the soil, the dryness of wind, the burgeoning seed, are all precisely describable. The poetry of this culture is rich and succinct, the graphic arts reveal the landscape as the icon. Architecture, village and town building use natural materials directly with stirring power, but it is garden making that is the unequaled art form of this society. The garden is the metaphysical symbol of society in Tao, Shinto and Zen—man in nature.

Yet this view is not enough: man has fared less well than nature here. The jewel of the western tradition is the insistence upon the uniqueness of the individual and the preoccupation with justice and compassion. The Japanese medieval feudal view has been casual to the individual human life and rights. The western assumption of superiority has been achieved at the expense of nature. The oriental harmony of man-nature has been achieved at the expense of the individuality of man. Surely a united duality can be achieved by accounting for man as a unique individual rather than as a species, man in nature.

Let us by all means honor the attribution of dignity, even divinity, to man. But do we need to destroy nature to justify man—or even to obtain God's undivided attention? We can only be enlarged by accepting the reality of history and seeing ourselves in a non-human past, our survival contingent upon non-human processes. The acceptance of this view is not only necessary for the emancipation of western man, it is essential for the survival of all men.

If the Orient is the storehouse of the art of naturalism, it is the West that is the repository of anthropocentric art. It is a great if narrow inheritance, a glorious wealth of music and painting, sculpture and architecture. The Acropolis and Saint Peter, Autun and Beauvais, Chartres and Chambord, Ely and Peterborough—all speak of the divinity of man. But when the same views are extended and used as the structure for urban form, their illusory basis is revealed. The cathedral as the stage for a dialogue between man and God is admirable as a metaphysical symbol. When the supremacy of man is expressed in the form of the city, one seeks the evidence to support this superiority and finds only an assertion. Moreover, the insistence upon the divinity of man over nature has as its companion the insistence in the divine supremacy of some man over all men. It requires a special innocence to delight in the monumental accomplishments of the Renaissance cities, notably Rome and Paris, without appreciating that the generating impulses were more authoritarian than humanitarian—authoritarian towards nature and man.

If we lower the eyes from the wonderful, strident but innocent assertions of man's supremacy, we can find another tradition, more pervasive than the island monuments, little responsive to the grand procession of architectural styles. This is the vernacular tradition. The empiricist may not know first principles, but he has observed relations between events—he is not a victim of dogma. The farmer is the prototype. He prospers only insofar as he understands the land and by his management maintains its bounty. So too with the man who builds. If he is perceptive to the processes of nature, to materials and to forms, his creations will be appropriate to the place; they will satisfy the needs of social process and shelter, be expressive and endure. As indeed they have, in the hill towns of Italy, the island architecture of Greece, the medieval communities of France and the Low Countries and, not least, the villages of England and New England.

Two widely divergent views have been discussed, the raucous anthropocentrism which insists upon the exclusive divinity of man, his role of dominion and subjugation on one hand, and the oriental view of man submerged in nature on the other. Each view has distinct advantages, both have adaptive value. Are the benefits of each mutually exclusive? I think not; but in order to achieve the best of both worlds it is necessary to retreat from polar extremes. There is indisputable evidence that man exists in nature; but it is important to recognize the uniqueness of the individual and thus his especial opportunities and responsibilities.

If the adaptation of the western view towards this more encompassing attitude required the West to accept Tao, Shinto or Zen, there would be little hope for any transformation. However, we have seen that the vernacular of the West has many similarities to the products of oriental pantheism. There is another great bridge, the 18th-century English landscape tradition. This movement originated in the poets and writers of the period, from whom developed the conception of a harmony of man and nature. The landscape image was derived from the painters of the Campagna—Claude Lorraine, Salvator Rosa and Poussin. It was confirmed in a new aesthetic by the discovery of the Orient and on these premises transformed England from a poverty-stricken and raddled land to that beautiful landscape that still is visible today. This is a valid western tradition, it presumes a unity of man and nature, it was developed empirically by a few landscape architects, it accomplished a most dramatic transformation, it has endured. Yet the precursory understanding of natural processes that underlay it was limited. A better source is that uniquely western preoccupation, science.

Surely the minimum requirement today for any attitude to man-nature is that it approximate reality. One could reasonably expect that if such a view prevailed, not only would it affect the value system, but also the expressions accomplished by society.

Where else can we turn for an accurate model of the world and ourselves but to science? We can accept that scientific knowledge is incomplete and will forever be so, but it is the best we have and it has that great merit, which religions lack, of being self-correcting. Moreover, if we wish to understand the phenomenal world, then we will reasonably direct our questions to those scientists who are concerned with this realm—the natural scientists. More precisely, when our preoccupation is with the interaction of organisms and environment—and I can think of no better description for our concern—then we must turn to ecologists, for that is their competence.

We will agree that science is not the only mode of perception—that the poet, painter, playwright and author can often reveal in metaphor that which science is unable to demonstrate. But, if we seek a workman's creed which approximates reality and can be used as a model of the world and ourselves, then science does provide the best evidence.

From the ecological view one can see that, since life is only transmitted by life, then, by living, each one of us is physically linked to the origins of life and thus—literally, not metaphorically—to all life. Moreover, since life originated from matter then, by living, man is physically united back through the evolution of matter to the primeval hydrogen. The planet Earth has been the one home for all of its processes and all of its myriad inhabitants since the beginning of time, from hydrogen to men. Only the bathing sunlight changes. Our phenomenal world contains our origins, our history, our milieu; it is our home. It is in this sense that ecology (derived from *oikos*) is the science of the home.

George Wald once wrote facetiously that "it would be a poor thing to be an atom in a Universe without physicists. And physicists are made of atoms. A physicist is the atom's way of knowing about atoms."* Who knows what atoms yearn to be, but we are their progeny. It would be just as sad to be an organism in a universe without ecologists, who are themselves organisms. May not the ecologist be the atom's way of learning about organisms—and ours?

The ecological view requires that we look upon the world, listen and learn. The place, creatures and men were, have been, are now and are in the process of becoming. We and they are here now, co-tenants of the phenomenal world, united in its origins and destiny.

As we contemplate the squalid city and the pathetic subdivision, suitcase agriculture and the cynical industrialist, the insidious merchant, and the product of all these in the necklace of megalopoles around the continent, their entrails coalescing, we fervently hope that there is another way. There is. The ecological view is the essential component in the search for the face of the land of the free and the home of the brave. This work seeks to persuade to that effect. It consists of borrowings from the thoughts and dreams of other men, forged into a workman's code—an ecological manual for the good steward who aspires to art.

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*George Wald in ***The Fitness of the Environment***, by Lawrence J. Henderson, Beacon Press, Boston, Massachusetts, 1958, p. xxiv.

A Step Forward

It took only the merest information to examine and prescribe for the Jersey Shore. Here the processes were simple as were their forms and the operative value was single and strident—survival by the sea. Yet can the values which nature represents be weighed and measured so that decent, prudent men can act in deference to them? Moreover—the example of the Jersey Shore involved such a dramatic threat—can the same ecological method be employed for more complex problems and less dramatic values?

The problem of a major highway presents an excellent opportunity to demonstrate that natural processes can be construed as values in such a way as to permit a rational response to a social value system. It is necessary only to abandon the economic model and the calloused indifference of anthropocentric man.

The highway is a particularly appropriate study. If one seeks a single example of an assertion of simple-minded single purpose, the analytical rather than the synthetic view and indifference to natural process—indeed an anti-ecological view—then the highway and its creators leap to mind. There are other aspirants who vie to deface shrines and desecrate sacred cows, but surely it is the highway commissioner and engineer who most passionately embrace insensitivity and philistinism as way of life and profession.

In highway design, the problem is reduced to the simplest and most commonplace terms: traffic, volume, design speed, capacity, pavements, structures, horizontal and vertical alignment. These considerations are married to a thoroughly spurious cost-benefit formula and the consequences of this institutionalized myopia are seen in the scars upon the land and in the cities.

Who are as arrogant, as unmoved by public values and concerns as highway commissions and engineers? There they go, laden with money, offering the enormous bribe of ninety per cent of the cost of realizing their narrow purposes. Give us your beautiful rivers and valleys, and we will destroy them: Jones Falls in Baltimore, the Schuylkill River in Philadelphia, Rock Creek in Washington, the best beauty of Staten Island, the Stony Brook-Millstone Valley near Princeton. Give us your cities, their historic areas and buildings, their precious parks, cohesive neighborhoods, and we will rend them—in New Orleans and Boston, San Francisco and Memphis. Urban freeways cut white swaths through black neighborhoods but this is not discrimination, it matters little whether they are black or white, rich or poor—although black and poor is easier. Having scarred the cities, what next? Surely those areas throughout the country that are particularly beautiful—these must be served by scenic highways. The accumulation of gasoline taxes in the Highway Fund must be expended, and the most powerful lobby in the United States is determined that it shall be so. Unmoved by the more pressing needs for humanizing cities, reducing poverty or improving education, four billion dollars will be expended on scenic highways. So those areas defined as beautiful must now be savaged. In the process scenic areas can only become less scenic.

Yet it was not always so and need not be today. The beginnings were more promising when the Bronx River Parkway was conceived, over forty years ago—the first example of a modern highway. The objective was not only to satisfy traffic requirements, but to use this investment of public funds to rehabilitate the foul river and its raddled landscape to create new public values. This it accomplished. The highway was used as an ameliorative device to improve the landscape and provide a satisfying visual experience for the driver, while meeting the clear needs of traffic. In areas where remedy was unnecessary and the scene was beautiful, the task of the highway was to intervene with the least possible damage, to exploit and reveal the visual qualities of the landscape while meeting traffic requirements. So that in the Westchester County Parkway system conceived in the thirties, in the Palisades Parkway and, perhaps most clearly, in the Skyline Drive of the Blue Ridge Parkway, these objectives were accomplished. Now these were all designed by landscape architects: and it became clear that their effete concerns with such inconsequential considerations as natural beauty, historic buildings, reclamation of landscapes or even deference to topography were obstructions to the task of creating a highway system for an automotive America. So the task was given to those who, by instinct and training, were especially suited to gouge and scar landscape and city without remorse—the engineers. The landscape architects were then retained to apply balm to heal the scars and wounds inflicted on the landscape.

A plumber is a most important member of society—our civilization could not endure long without his services: but we do not ask plumbers to design cities or buildings. So too with highways: the engineer is most competent when considering the automobile as a projectile that responds to the laws of dynamics and statics. He understands structures and pavements very well indeed and his services are indispensable. But the matter of the man in the automobile as a creature with senses is outside his ken; the nature of the land as interacting biophysical processes is unknown to him. His competence is not the design of highways, merely of the structures that compose them—but only after they have been designed by persons more knowing of man and the land.

The method that has been used traditionally by the Bureau of Public Roads and State Highway Departments involves calculating the savings and costs derived from a proposed highway facility. Savings include savings in time, operating costs and reduction in accidents. Costs are those of construction and maintenance. It is necessary to obtain a minimum ratio of savings to costs of 1.2:1.0. Any qualitative factors are considered after the conclusion of the cost-benefit analysis, and then only descriptively. The objective of an improved method should be to incorporate resource values, social values and aesthetic values in addition to the normal criteria of physiographic, traffic and engineering considerations. In short, the method should reveal the highway alignment having the maximum social benefit and the minimum social cost. This poses difficult problems. It is clear that new considerations must be interjected into the cost-benefit equation and that many of these are considered non-price factors. Yet the present method of highway cost-benefit analysis merely allocates approximate money values to convenience, a commodity as difficult to quantify as either health or beauty.

Interstate Highways should maximize public and private benefits:

1 by increasing the facility, convenience, pleasure and safety of traffic movement.

2 by safeguarding and enhancing land, water, air and biotic resources.

3 by contributing to public and private objectives of urban renewal, metropolitan and regional development, industry, commerce, residence, recreation, public health, conservation and beautification.

4 by generating new productive land uses and by sustaining or enhancing existing ones.

Such criteria include the orthodoxies of route selection, but place them in a larger context of social responsibility. The highway is no longer considered only in terms of automotive movement within its right of way, but in context of the physical, biological and social processes within its area of influence.

The highway is thus considered as a major public investment, which will affect the economy, the way of life, health and visual experience of the entire population within its sphere of influence. It is in relation to this expanded role that it should be located and designed.

It is clear that the highway route should be considered a multipurpose rather than a single-purpose facility. It is also clear that, when a highway route is so considered, there may be conflicting objectives. As in other multipurpose planning, the objective should be to maximize all potential complementary social benefits at the least social cost.

This means that the shortest distance between two points, meeting predetermined geometric standards, is not the best route. Nor is the shortest distance over the cheapest land. **The best route is the one that provides the maximum social benefit at the least social cost.**

The present method of cost-benefit analysis, as employed for route selection, has two major components: (i) the savings in time, operating costs and safety provided by the proposed facility and (ii) the sum of engineering, land and building purchase, financing, administrative, construction, operation and maintenance costs.

On the credit side it seems reasonable to allocate all economic benefits derived from the highway. These benefits accrue from the upgrading of land use, frequently from agricultural to industrial, commercial or residential uses. Great indeed are these values. In certain favored locations they may be multiples of the cost of the highway. But highways do reduce economic values; they do constitute a health hazard, a nuisance and danger; they can destroy the integrity of communities, institutions, residential quality, scenic, historic and recreational value.

This being so, it appears necessary to represent the sum of effects attributable to a proposed highway alignment and to distinguish these as benefits, savings and costs. In certain cases these can be priced and can be designated price benefits, price savings, or price costs. In other cases, where valuation is difficult, certain factors can be identified as non-price benefits, savings or costs.

A balance sheet in which most of the components of benefit and cost are shown should reveal the alignments of maximum social utility.

Considerations of traffic benefits as calculated by the Bureau of Public Roads can be computed for alternative alignments. The cost of alternative routes can be calculated. Areas in which increased land and building values may result can be located, if only tentatively, in relation to the highway and prospective intersections. Prospective depreciation of land and building value can also be approximately located. Increased convenience, safety and pleasure will presumably be provided within the highway right-of-way;

inconvenience, danger and displeasure will parallel its path on both sides. The degree to which the highway sustains certain community values can be described as can the offense to health, community, scenery and other important resources.

The method proposed here is an attempt to remedy deficiencies in route-selection method. It consists, in essence, of identifying both social and natural processes as social values. We will agree that land and building values do reflect a price value system, we can also agree that for institutions that have no market value there is still a hierarchy in values—the Capitol is more valuable than an undifferentiated house in Washington, Independence Hall more precious than a house in Philadelphia's Society Hill or Central Park more valuable than any other in New York. So too with natural processes. It is not difficult to agree that different rocks have a variety of compressive strengths and thus offer both values and penalties for building; that some areas are subject to inundation during hurricanes and other areas are immune; that certain soils are more susceptible to erosion than others. Additionally,

SUGGESTED CRITERIA FOR INTERSTATE HIGHWAY ROUTE SELECTION

BENEFITS AND SAVINGS	COSTS
Price Benefits	**Price Costs**
Reduced time distance	Survey
Reduced gasoline costs	Engineering
Reduced oil costs	Land and building acquisition
Reduced tire costs	Construction costs
Reduced vehicle depreciation	Financing costs
Increased traffic volume	Administrative costs, Operation and maintenance costs
Increase in Value (Land & Bldgs.)	Reduction in Value (Land & Bldgs.):
Industrial values	Industrial values
Commercial values	Commercial values
Residential values	Residential values
Recreational values	Recreational values
Institutional values	Institutional values
Agricultural land values	Agricultural land values
Non-price Benefits	**Non-price Costs**
Increased convenience	Reduced convenience to adjacent properties
Increased safety	Reduced safety to adjacent populations
Increased pleasure	Reduced pleasure to adjacent populations
	Health hazard and nuisance from toxic fumes, noise, glare, dust
Price Savings	**Price Costs**
Non-limiting topography	Difficult topography
Adequate foundation conditions present	Poor foundations
Adequate drainage conditions present	Poor drainage
Available sands, gravels, etc.	Absence of construction materials
Minimum bridge crossings, culverts, and other structures required	Abundant structures required
Non-price Savings	**Non-price Costs**
Community values maintained	Community values lost
Institutional values maintained	Institutional values lost
Residential quality maintained	Residential values lost
Scenic quality maintained	Scenic values lost
Historic values maintained	Historic values lost
Recreational values maintained	Recreational values lost
Surface water system unimpaired	Surface water resources impaired
Groundwater resources unimpaired	Groundwater resources impaired
Forest sources maintained	Forest resources impaired
Wildlife resources maintained	Wildlife resources impaired

there are comparative measures of water quantity and quality, soil drainage characteristics. It is possible to rank forest or marsh quality, in terms of species, numbers, age and health in order of value. Wildlife habitats, scenic quality, the importance of historic buildings, recreational facilities can all be ranked.

If we can evaluate and rank aesthetic, natural-resource and social values, we can then proceed. Thus, if destruction or despoliation of existing social values were to be caused by proposed highway alignment, that alignment value would be decreased by the amount of the social costs. The physical costs of construction are social costs too.

Therefore we can conclude that any alignment that transects areas of high social values and also incurs penalties in heightened construction costs will represent a maximum-social-cost solution. The alternative is always to be sought—an alignment that avoids areas of high social costs and incurs the least penalties in construction costs and creates new values. The basis of the method is constant for all case studies—that nature is interacting process, a seamless web, that it is responsive to laws, that it constitutes a value system with intrinsic opportunities and constraints to human use.

If we can accept the initial proposition we can advance to a second. That is, if physical, biological and social processes can be represented as values, then *any* proposals will affect these. One would ask that such changes be beneficial, that they add value. But changes to land use often incur costs.

The best of all possible worlds would be a proposal that provided new values and incurred no costs. In the absence of this unlikely circumstance we might be satisfied if new values exceeded the costs incurred. Preferably these costs should not involve irreversible losses. The solution of maximum social benefit at least social cost might be the optimum. This could be called the solution of maximum social utility.

In essence, the method consists of identifying the area of concern as consisting of certain processes, in land, water and air—which represent values. These can be ranked—the most valuable land and the least, the most valuable water resources and the least, the most and least productive agricultural land, the richest wildlife habitats and those of no value, the areas of great and little scenic beauty, historic buildings and their absence and so on. The interjection of a highway will transect this area; it will destroy certain values. Where will it destroy the least? Positively the highway requires certain conditions—propitious slopes, good foundation materials, rock, sand and gravel for its construction and other factors. Propitious circumstances represent savings, adverse factors are costs. Moreover, the highway can be consciously located to produce new values—more intense and productive land uses adjacent to intersections, a delightful experience for the motorist, an added convenience to the traveler. The method requires that we obtain the most benefit for the least cost but that we include as values social process, natural resources and beauty.

We can identify the critical factors affecting the physical construction of a highway and rank these from least to greatest cost. We can identify social values and rank them from high to low. Physiographic obstructions—the need for structures, poor foundations, etc.—will incur high social costs. We can represent these identically. For instance, let us map physiographic factors so that the darker the tone, the greater the cost. Let us similarly map social values so that the darker the tone, the higher the value. Let us make the maps transparent. When these are superimposed, the least-social-cost areas are revealed by the lightest tone.

However, there is one important qualification that must be recognized. While in every case there should be little doubt as to the ranking within a category, there is no possibility of ranking the categories themselves.

For example, it is quite impossible to compare a unit of wildlife value with a unit of land value or to compare a unit of recreational value with one of hurricane danger. All that can be done is to identify natural and social processes and superimpose these. By so doing we can observe the maximum concurrence of either high or low social values and seek that corridor which transects the areas of least social value in all categories. Exact resolution of this problem seems unrealizable. Economists have developed price values for many commodities but there seems no prospect that institutions, scenic quality, historic buildings, and those other social values considered, can be given exact price values.

It is immediately conceded that the parameters are not co-equal. In a given area, considered by itself, existing urbanization and residential quality are likely to be more important than scenic value or wildlife. Yet it is reasonable to presume that, where there is an overwhelming concentration of physiographic obstruction and social value, such areas should be excluded from consideration; where these factors are absent, there is a presumption that such areas justify consideration.

This is not yet a precise method for highway route selection; yet it has the merit of incorporating the parameters currently employed and adding new and important social considerations, revealing their locational characteristics, permitting comparison, disclosing aggregates of social values and costs. Whatever limitations of imprecision it may have, it does enlarge and improve existing method.

The preceding discussion has emphasized the identification of physiographic corridors containing the lowest social values as the preferred route for highways. In our discussion of cost-benefit analysis, we mentioned the role of the proposed highway in creating new values. This view deserves a greater emphasis. Within limits set by the points of origin and destination, responsive to physiographic obstructions and the pressure of social values, *the highway can be used as conscious public policy to create new and productive land uses at appropriate locations.* In any such analysis cost-benefit calculations would require that any depreciation of values would be discounted from value added. In addition, scenic value should be considered as possible added value. It is, of course, possible that a route could be physiographically satisfactory, avoid social costs, create new economic values at appropriate locations and also provide a satisfactory scenic experience.

The highway is likely to create new values whether or not this is an act of conscious policy. Without planning, new values may displace existing ones, but even if a net gain results there may well be considerable losses.

Some years ago I gave an address at Princeton on The Ecological View. I extolled the diagnostic and prescriptive powers of this integrative science. The following day I was asked to employ ecology in the selection of a thirty-mile route for I-95 between the Delaware and Raritan Rivers. The inhabitants of this bucolic region were threatened by an alignment that appeared to select almost all that was precious and beautiful—the maximum destruction to be accomplished with the least benefit at the greatest cost. The enraged citizenry constituted themselves into The Delaware-Raritan Committee on I-95. Faced with the problem, little time and less money, the method we have just outlined was developed and applied. Through the transparencies—like light shining through a stained glass window—was visible that alignment of least-social-cost. Its influence was felt and, one after another, through thirty-four alternative alignments, the proposed highway moved nearer and nearer to that ultimately proposed by the author.

To claim this as an ecological method is to flatter it. It is enough to say that it did use data reflecting social, resource and aesthetic values, but the data were hurriedly assembled and gross. Residential value was derived from land and building values that gave high social value to the wealthy and too little to the poor, urbanization was classed into a few gross categories, excluding the enormous variety of conditions within this description. Nonetheless, it offered a large measure of success. It provided a method whereby the values employed were explicit, where the selection method was explicit—where any man, assembling the same evidence, would come to the same conclusion. It introduced the least-social-cost/maximum-social-benefit solution, a relative-value system that could consider many nonprice benefits, savings and costs, and not least, the measure of scenic experience as a potential value.

Subsequently the method was employed in the Borough of Richmond in New York where, as is now commonplace, a treasured open space was threatened by highway destruction. Here the subject of traffic was not in dispute, no intersections were proposed for the controversial five-mile section of the Richmond Parkway, and social benefit was thus limited to the convenience of the trip and the scenic experience of the motorist. In this example the matter of reducing social costs to maintain social values was preponderant—but increasingly this is the overwhelming problem.

The issue was a simple one. Should the highway select the Greenbelt for its route in order to reveal it to the public or should it serve the Greenbelt, but avoid the destruction of transection? The character of the highway is not changed by entitling it a parkway but this title has been used to describe highways in areas of great natural beauty—the Blue Ridge and Palisades Parkways, for example. Here, where beautiful landscapes are abundant, there is little social loss and great social benefit. Where resources are as precious as the Greenbelt in Staten Island, this conception is not appropriate. Better, follow the example of the Bronx River Parkway and create new values while avoiding destruction of the few oases that remain for twelve million New Yorkers.

We can now apply the method to the Richmond Parkway. The first group of factors included some of those orthodox criteria normally employed by engineers—slope, bedrock geology, soil foundation conditions, soil drainage and susceptibility to erosion. The degree of opportunity or limitation they afford is reflected directly in the cost of highway construction. The next category concerns danger to life and property and includes areas vulnerable to flood inundation from hurricanes. The remaining categories are evaluations of natural and social processes including historic values, water values, forest values, wildlife values, scenic values, recreation values, residential values, institutional values and land values. Each factor, with its three grades of values, is photographed as a transparent print. The transparencies of the first group are superimposed upon one another and from this a summary map is produced that reveals the sum of physiographic factors influencing highway route alignment. Each subsequent parameter is then superimposed upon the preceding until all parameters are overlaid. The darkest tone then represents the sum of social values and physiographic obstructions to a highway corridor; the lightest tone reveals the areas of least social value representing the least direct cost for highway construction. The highway should be located in that corridor of least social value and cost, connecting points of origin and destination. Moreover, it should provide new values—not only of convenience, but also of scenic experience—as a product of public investment.

It is important to observe that the reader parallels the experience of the author at the beginning of the study. The method was known but the evidence was not. It was necessary to await its compilation, make the transparent maps, superimpose them over a light table and scrutinize them for their conclusion. One after another they were laid down, layer after layer of social values, an elaborate representation of the Island, like a complex X-ray photograph with dark and light tones. Yet in the increasing opacity there were always lighter areas and we can see their conclusion.

Each of the social values has now been superimposed. The first group of physiographic corridors is apparent. When the next factor of tidal inundation is examined it is seen to set western limits to the western corridor. Land values are highest in the Greenbelt but relatively low to the west save for the exception of a commercial area. Each subsequent superimposition of social values gives primacy to the Greenbelt until the final summation shows the highest concentration of social values and physiographic obstruction concentrated in the eastern sector. If the area of highest social value is clear, so too is that of the lowest value reflected in a broad band in the western physiographic corridor. The western limits of the zone of lowest social value are established by the Wildlife Refuge, the physiographic constraints offered by the sanitary landfill and marshes.

In sum, if the values identified and ranked are correct, the composite map on this page represents the sum of social values, physiographic opportunities and constraints. The darker the tone the greater the social cost of highway construction, the lighter the tone the less the social cost. The Greenbelt looms as the concentration of highest social value and physiographic obstruction; a path of least social cost is visible to the west.

The method is explicit in the identification and ranking of physiographic opportunities and limitations to a highway corridor. It is equally explicit as to social values. As can be seen clearly, the maximum concurrence of physiographic limitations and social values exists as a solid mass in the middle of the study area. This is the Staten Island Greenbelt. The presence and concurrence of these values is seen as a resistance to highway transection, their paucity as an opportunity. When the proposed alignments are examined from right to left, it is seen that the first would violate the highest social values and would incur the highest social costs. The second is as culpable, whereas the next two in large part conform to the corridor of least social cost. A propitious alignment can be found within the area defined by the two westward routes in their lower section, but to the north the least-social-cost corridor follows in a band to the west of the shared alignments.

The Tri-State Transportation Commission reversed its decision to transect the Greenbelt with the Richmond Parkway and accepted the least-social-cost alignment developed in this study.

The Richmond Parkway Study was undertaken for the New York City Department of Parks by Wallace, McHarg, Roberts and Todd. The author was responsible for the project which was supervised by Mr. Narendra Juneja, assisted by Mr. Derik Sutphin and Mr. Charles Meyers.

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REFLECTIONS ON ADVOCACY PLANNING

Lisa R. Peattie

Planning initiative on the part of individual groups and communities within urban areas has been made necessary by the increasing bureaucratization and technical basis of decisions in current urban society. The efforts of advocate planners to represent these groups are made difficult because of their frequent lack of homogeneity, community feeling, and common interests in action. The treatment of local areas as "communities" of homogeneous interests can result in severe damage to the interest of their weakest inhabitants. Further, it is difficult to draw low-income families into the framework of planning, and to evoke their concern for the planning issues normally posed by the local establishment. Thus it is necessary to carefully generate viable issues in the work and maintain a consciousness of the interrelation of technical and political matters at all levels. The advocate planner's need to evoke and formulate issues makes him dangerously similar to other manipulators of the poor's interests. One of the most difficult kinds of issues is the type like transportation which, although generated at the community level, must be studied and argued at the metropolitan scale with the consequent loss of a clearly identified client group. Advocacy planning takes many forms depending on its sponsorship. In spite of its problems, it fills a crucial need for managing latent conflict in the cities and for humanizing public action.

THE PRESS OF BUREAUCRATIC MANAGEMENT

The concept of "advocacy planning" can only be understood in the context of the management of modern American cities. In ancient cities, planning was primarily a function of individual leaders and of relatively small social groups—families, guilds, religious fraternities, and the like. The "squatter settlements" surrounding cities of the developing countries suggest the degree to which public policy and official planning still control only a relatively limited part of urban life. Our cities are more and more publicly managed environments. Private actions take place within a generally narrowing network of public intervention, public policy, and public planning.

One way in which we have handled this transformation has been by recasting questions of public policy as problems for technical solution. "Much of the history of social progress in the twentieth century," says Harvey Brooks, "can be described in terms of the transfer of wider and wider areas of public policy from politics to expertise. Often the problems of political choice have become buried in debates among experts over highly technical alternatives."[1] The increasing complexity of the management apparatus has made it difficult for ordinary voters to make judgments and develop choices relevant to its exercise. As Donald Michael has put it,

> Widespread geographic diffusion of urban problems combined with the sophisticated techniques which will be used to analyze areas and evolve programs for dealing with them will mean that many relatively well-educated citizens may find metropolitan and regional problems too technical and complex to follow closely, and will attempt a detailed knowledge of them only when they become scandalous or critical.[2]

The casting of policy problems in a context of technical analysis too abstract for the ordinary citizen to comprehend clearly has a strong basis in the technical complexity of our cities. But it also has a political use. The number of public policy decisions, and the numbers and varieties of persons affected by each, would probably make our public apparatus unworkable if all decisions were to be handled within the traditional framework of political debate. In a rapidly changing world of pluralistic goals, the casting of policy decisions into a technical framework makes possible an operating consensus that is necessary to keep our cities running even as well as they do.

But as a consequence, we have developed a set of bureaucratic management institutions which often seem impersonal and alien to human feelings. "Our technological civilization . . . seems to overtake and overwhelm us as though it were something foreign coming in on us. . . ."[3] People may respond to this sense of being overwhelmed by political apathy and disengagement or they may protest. It is interesting to see how the polemic literature against urban renewal and against fluoridation of drinking water share the angry suspicion that something has been "put over" on ordinary people by the experts. In Boston, the urban renewal picket lines include an odd alliance of John Birchers and Students for Democratic Society, both in their diverse ways speaking for a resurgence of individualism against "the system." I suspect that the hippies in Haight-Ashbury represent another, and still odder, manifestation of a more generally distributed sense of being overwhelmed by the social apparatus.

The shift from politics to expertise changes the rules for exercising power, as well as the structure of effective power. The result may entail a cost in equity, since it can well be argued that those most disadvantaged will be the people at the bottom of the system—those who are, through lack of education and of technical sophistication, particularly ill-prepared to deal with the presentation of issues in a technical framework. Such groups tend to be disadvantaged in the traditional political framework, and still more so when it comes to dealing with those who speak the language of maps, diagrams, and statistical tables. Advocacy planning has its origins initially in the perception that such groups need planners to make their case, to express their interests. Therefore, it represents a search by planners for new kinds of clientele.

ADVOCACY PLANNING

Advocate planners take the view that any plan is the embodiment of particular group interests, and therefore they see it as important that any group which has interests at stake in the planning process should have those interests articulated. In effect, they reject both the notion of a single "best" solution and the notion of a general welfare which such a solution might serve. Planning in this view becomes pluralistic and partisan—in a word, overtly political. Paul Davidoff writes of his

> belief that there is or should be a Republican and Democratic way of viewing city development; that there should be conservative and liberal plans, plans to support the private market and plans to support greater government control. There are many possible roads for a community to travel and many plans should show them. Explication is required of many alternative futures presented by those sympathetic to the construction of each such future.[4]

There now exist in several cities "advocacy planning" groups that propose to help people make their interests felt, especially people of low-income communities, who seem to be under-represented in the planning process. The present writer has been a member of such a group in Cambridge, Massachusetts—Urban Planning Aid, incorporated as a nonprofit institution in June 1966 to:

> review and evaluate specific planning proposals which affect low-income communities; to develop planning strategies, physical designs and implementation programs for these communities, and, to act as planning advocate for these communities in order to make public plans reflect their needs . . . .[5]

In its first year, Urban Planning Aid, besides short-term consulting relationships with various community groups, has had several major projects differing radically in scale. They have included a continuing consultant relationship to a small group representing the residents of a neighborhood in the Boston ghetto where a new high school is to be the central focus of an urban renewal project, and support of opposition to the routing of a major loop highway through the cities of Cambridge and Boston. Until recently, when funded by the American Friends Service Committee, it had failed to find any kind of solid financial base for its activities, and thus has had the task of developing new procedural techniques while operating with volunteer help and evening and weekend staff. That many problems have appeared goes without saying; I should like to comment on those which appear to be inherent in the nature of advocacy planning.

THE CLIENTS Urban Planning Aid defines its functions in terms of technical assistance to "low-income communities." A low-income community may be operationally defined as a specific urban area whose inhabitants have a low average income. When it comes to identifying the needs of such communities and of establishing a consultant-client relationship, certain difficulties at once appear. For instance, how do you identify, define, and establish a working relationship with the client? Planners and sociologists speak readily of "neighborhoods," but the fact seems to be that while city dwellers live in areas with varying physical and social characteristics, the networks of social relationships in which any person takes part rarely cluster together so neatly in "neighborhoods." Some city dwellers (although by no means all) are extremely reluctant to move from the territory to which they are accustomed and where many of their individual institutional ties are found. But even such locality-rooted people do not usually seem to have a clear sense of belonging to a neighborhood with distinct boundaries. During investigations in Philadelphia, it was found useful to drop the term "neighborhood" altogether because interviewers could find no agreement among the citizens as to the boundaries of the hypothesized neighborhoods.[6]

Herbert Gans writes of the Boston Italians in the West End as "urban villagers" with a clear sense of being a People, but notes that even in this case "the concept of the West End as a single neighborhood was foreign to the West Enders themselves. . . . Until the coming of redevelopment, only outsiders were likely to think of the West End as a single neighborhood. After the redevelopment was announced, the residents were drawn together by the common danger, but even so, the West End never became a cohesive neighborhood."[7] Furthermore, while a typical social component of the slum is the locality-entrenched ethnic group, other typical components are those who use the slum as a low-rent refuge or temporary staging area, or as an area where activities are permitted which in other parts of the city would be disallowed;[8] while such groups may find the existence of a low-rent or slum community extremely useful to them, in effect one particular "neighborhood" with certain social characteristics may be quite replaceable by another with similar characteristics.

Observers since Booth's time have noted that the urban slum lacks institutions by which it might represent itself as an entity. The slum, says Peter Marris, "has no leaders, few community associations, no means of asserting a common purpose: it may not even be very neighborly, as neighborliness is understood in the suburbs. It is held together as a community only by its hostility to the world outside, and lacks any integrating organization."[9]

As in the instance studied by Herbert Gans, "community organizations" tend to appear in such neighborhoods as a response to a threat: "the neighborhood" or "the community" comes to be articulated as that area about to be affected by some public policy, as in an urban renewal program. It is the organizations that appear to "represent" such "communities" which are likely to be the natural clients for the advocate planner.

What is the test of such a group's being adequately representative? This question arose at once when Urban Planning Aid began to work with an organization called the Lower Roxbury Community Committee with regard to a projected campus high school in Boston. It was readily apparent—a point not lost on the Boston

Redevelopment Authority (BRA), UPA's adversary in negotiations—that the active members of the organization were few, did not include members of the most economically deprived families in the area, and were not in communication with a sizable proportion of the local residents.

UPA, of course, was committed to supporting all possible efforts by the existing community group to widen its base of representation. One of UPA's first activities was to assist the local group in designing and carrying out a survey of the area residents' wants and needs in housing and community improvements; the survey project was thought of both as an instrument for information-gathering or "sounding out," and as a way of drawing residents into contact with the organization. A number of residents in fact were drawn into the activities of the organization, and several mass meetings drew sizable crowds, but it was at no time possible to claim that it had the active support of the majority of persons living in the area it intended to represent; we can be sure many have not heard of the Lower Roxbury Community Committee even today.

In view of these problems and in the face of additional requests for assistance from "community groups" in other parts of the city, the members of UPA made an attempt to develop a position on what amount of "representativeness" would be "adequate." No mathematical formula seemed possible. The expression of some previously unrepresented interest must necessarily take the form of a small organizational beginning, which, with time, the intent to broaden its base, and some successes to make participation appear rewarding, will pick up participation as it goes. It is just this kind of process which advocacy planning is intended to support. The people "at the bottom" are likely to be the slowest to become organized. Therefore, a preference for groups which are more "representative" in the sense of having more members or a higher ratio of members to potential members, might well mean aiding mainly middle class groups. The only working position that seemed feasible was collaboration with and assistance to organizations likely to progress in the direction of building representation for people previously unrepresented.

Still more critical difficulties are likely to appear when it comes to identifying the "community interests" which the advocate planner is to embody in a community plan. As already noted, any specified area in the city, particularly in the central city, is likely to contain people of strikingly different social characteristics, interests, and needs. Even in Herbert Gans' "urban village," Italians constituted less than half the population; there were also remnants of earlier waves of settlement—Jews, Poles, Irish, Albanians, Ukranians, and Greeks, and a number of other sorts of people who found the area convenient because of its location or low rents. These included Gypsies, families on AFDC (Aid to Families of Dependent Children), middle class professionals and students, hospital workers, artists, and families and individuals with various sorts of semi-incapacitating personal troubles.[10] The area in Boston represented by the Lower Roxbury Community Committee contained people with various kinds of commitments to it. They ranged from white and Negro home owners deploring the "decline of the neighborhood" and "that class of people" presently moving in, but anxious to hang on to their homes and help the neighborhood "come up" again; to families on AFDC and Gypsies living in storefronts, with little long-term commitment to the particular area but dependent on low rents in a housing market increasingly stacked against them.

At one of the meetings with the community group, the Redevelopment Authority representatives contrasted the lack of cohesiveness of the area to the more solid "Chinese community" with which the Redevelopment Authority had previously signed an agreement, and suggested that an area which was so little a "real community" as this one could hardly expect the same degree of consideration. At this a resident of the area, as it happened a Ceylonese lady who runs a rather interesting Buddhist nursery school, rose and made a little speech in which she pointed out that in this neighborhood many *different* kinds of people lived amicably together; that this was a situation which public policy should respect and support, rather than penalize for a lack of homogeneity.

The point appeared to me well taken, but the heterogeneity of many urban neighborhoods in fact causes serious problems for the advocate planner, who must attempt to reconcile the very different interests of those different sorts of people.

In fact, the result can be damaging to the weakest. In the Lower Roxbury case the demand for housing to be built on land around the new school was one on which everyone could agree, even if not everyone was equally interested in it. But one may see community groups struggling with the potentially explosive issue of neighborhood improvements which will raise property values (and rents) to the benefit of home owners and the injury of tenants. In Boston's Washington Park Renewal Project poor tenants were in effect improved right out of an area by an alliance between the public agency and a "community group" dominated by middle class property owners. In Boston's South End it has been the community representatives, not the public agency, who have opposed locating there a treatment center for the alcoholics of the local Skid Row. In Cambridge there is a neighborhood that is an unusually successful example of community planning—in fact, it is now extremely difficult to locate there any amount of badly needed low-income housing. The community is organized against it, and from these experiences one might suggest that a consequence of giving every neighborhood in a city its advocate planner might be a general closing-up of the city against the poor, especially the sorts of "problematic poor" represented by Gypsies and families on AFDC. When poor tenants, particularly those considered "social problems," co-exist in the same neighborhood with better off property owners, there are natural conflicts of interest which the co-existence in the same community only intensifies. One may either say, then, that "the community"—taken as everyone living in a specific area—has no single interest, or that the neighborhood contains several communities. In effect, advocacy planning for the local community miniaturizes, but does not eliminate, the problems of conflicting interest which inhere in the planning activities of citywide agencies.

Whether the scale is citywide or local neighborhood, all sources agree that the people at the bottom of the social structure are very much harder to draw into the planning framework than the members of the middle class. Interpretations of this situation vary. A wide variety of writers have treated this nonparticipation as an aspect of life-style; the poor are described at the least as nonjoiners, or more drastically as isolated or anomic.

> The poor man not only fails to comprehend society or his community, he is out of touch with it. He reads fewer newspapers, hears fewer news programs, joins fewer organizations, and knows less of the current life of either the community or the larger world than more prosperous better educated people do. Nor do the poor associate among themselves more than minimally. Experiencing separation from society and each other, it is natural for them to feel alone and detached. And feeling no identity, even with each other, they view the world as indifferent and distant.[11]

One may say also that the poor are often intimidated by people in positions of authority—and with some reason, for the disparity in power resources is clear on both sides.

Another view of the same phenomenon is that offered by James Q. Wilson who sees the difference between middle class and lower class in the situation as one of breadth of vision, as "public-regarding" versus "private-regarding" behavior. "Upper and upper middle class people are more likely to think in terms of general plans, the neighborhood or community as a whole, and long-term benefits (even when they might involve immediate costs to themselves); lower and lower middle class people are more likely to see such matters in terms of specific threats and short-term costs."[12]

An alternative view is possible. "The general favorable middle-class response to urban renewal, apparently not based on any unique perceptive powers of that income group, may be partially and more plausibly explained by the dominant role played by the middle class in shaping societal values."[13] As things work, the institutions with which people may collaborate or negotiate are responding particularly to the pressure of middle class interests, and are (not oddly) more relevant to those interests than they are to those of the people at the bottom. Programs and institutions which have to do primarily with the buildings in which people live are more relevant to people who have some long-term stake in those pieces of property. Joseph Lyford tells an illuminating story of a woman who rose at the beginning of a neighborhood block improvement meeting on New York's West Side to express her desires from the community improvement effort. "She said she had no job and wanted to work and that she had to work because there was no other way for her to live." She talked on, until finally someone managed to tell her, "Pinky Mae, be quiet; this meeting is not a place to ask about jobs." But other people like Pinky Mae asked such questions for which there was no place on the agenda. Nothing could be done with those questions.

> Finally the chairman had to ask the strangers to stop talking so that the meeting could proceed with the agenda. As the talk about schools, housing, and neighborhood improvement got under way, the Negroes left the meeting quietly, one or two at a time. By the end of the meeting only Pinky Mae and the man in the front row who had admonished her were still there, and then they went out too, and never again were any of these people seen at another meeting any place.[14]

APPROACHES TO PLANNING

Since it is so hard to draw the poor into planning, why should not the planners go out to them—gather data, take a poll, do interviews—and on this basis draw up an advocacy plan? This they can do, and in fact, this was one of the strategies used by UPA in its Lower Roxbury project. But this kind of sounding out is not a substitute for genuine participation for several reasons. In the first place, since people (very sensibly) tend to focus their wants on what they conceive possible to achieve, any first round of opinion-gathering will produce only a collection of complaints about garbage pick-up and street lighting. A meaningful set of opinions can only be gathered after a long process in which people are stimulated to consider new alternatives and understand their consequences. The opening-up of options must go along with the opening-up of opinions.

This is one way of saying something that we of UPA took a little time to grasp: that the technical and the political are interconnected at all levels. They are connected because people will not organize to attain something which looks impossible, and to organize around an issue involves some sense that the objective is both a practical and a political possibility. Thus they are connected also because the existence of an interest group in back of an objective helps to make the objective more attainable.

We thought of the situation in Lower Roxbury as one in which the members of the community could become organized around some fairly finely delineated issues as to the future of their area. It was naïve of us to imagine that this could be done in the way we planned—with the "community organizers" from the local community centers doing the organizing, and UPA providing the technical assistance, helping the members of the organization to articulate, clarify, and resolve issues. We could only have drawn more of the residents into the organization by raising possibilities relevant to all those kinds of people, and bringing them to their attention. The organizers could not be expected to have the technical know-how to do that. Nor, it turns out, will they particularly want to do so. The organizer is working toward the staging of a confrontation. For that, he needs both a small group of people who can work together around some central issues and enough back-up interest in the community so that when the time for confrontation comes, they will come to the meeting or sign the petition. More differentiated, sophisticated, and widespread discussion of the issues is, from this point of view, at least an extra, and probably a political liability.

We of UPA had another interesting surprise in Lower Roxbury. We found that we, too, could be looked upon as manipulators of the community, a fact all the more ludicrous because we thought of ourselves as defenders of the interests of the local people *against* manipulating institutions like the Boston Redevelopment Authority. But when, at a meeting of the Lower Roxbury groups, BRA representatives, representatives of UPA, and several community organizers, the question was raised as to whether the community group should not be discussing its strategy toward BRA without having members of that group present, the community group put *all* the outsiders into the hall—the BRA members, the community organizers, and the members of UPA. We were *all* manipulators.

This, of course, was correct. Even without administrative power, the advocate planner is a manipulator. The power to conceptualize is a power to manipulate. The planner may not be the first to identify "problems" of an urban area, but he puts them on the agenda and plays a large part in defining the terms in which the problems will be thought about—and those terms in effect play a large part in determining the solution.

He is not and can never be a simple channel through which flow the "interests of the community." Those interests become transformed as they pass into the planner's technical framework. And, as we noticed of ourselves, the advocate planner, like the establishment planner, finds it easier to deal with some issues—like housing —than with others that might be more salient to some people in the area.

The agenda, which the advocate planner has such a large part in setting for the community, is in turn largely set for him by the action opportunity structure. The items for the agenda are presented by the available programs and institutions and their priority must reflect the necessity of dealing with and the possibility of taking advantage of the programs that exist. The advocacy plan thus tends to be more a reaction to than an enactment of.

One kind of problem resulting from such necessary reformulation of issues was presented by Urban Planning Aid's part in opposing the Inner Belt highway, a large limited-access loop highway planned for Boston and its inner suburbs under the federal highway program. At first, UPA's involvement appeared in the same context as its involvement in Lower Roxbury; it was defending the interests of a "low-income community," in this case, that part of Cambridge which was the designated route of the highway. But this time the controversy soon developed a new form. The construction of a road is a classic instance of the social principle that at times some persons must be inconvenienced or disadvantaged in order to execute a project which benefits many people. Urban Planning Aid, in taking up the issue of the Inner Belt, could hardly make a case simply in terms of the interests of the people in Cambridge whose homes were to be taken. It found itself escalating the issue into one of the procedures and criteria used in planning the highway and others like it. UPA members produced a report on metropolitan transportation planning in Boston which argued that the planning of the Inner Belt was not only based on outmoded and inadequate data, and failed to satisfy federal guidelines, but that the procedures used generally tended to favor the interests of highway users as against users of mass transit. At this point, UPA was no longer speaking in the name of a specific low-income community, but appealing to planners' standards of technical adequacy, raising issues of due process in decision-making, and making a claim, in effect, that a certain public policy-making system had a bias against low-income groups.

In defining the issue in these terms, UPA did not lack supporters, especially from the academic community. But who was now its client? The people who would have benefited from a different pattern of public expenditure as between highways and mass transit, and a transportation system that counted the social costs of a reduction in the housing stock and the cutting up of residential communities by highways were all over the urban area. Thus UPA was speaking for people widely dispersed geographically, unaware of themselves as constituting an interest group, and unaggregated in any particular social unit or institution. Urban Planning Aid now had neither a clearly defined client nor a clearly defined opponent; it was speaking for institutional restructuring, and its apposite model now appeared not so much that of the lawyer defending an indigent client as that of the radical political action group. The interests of the community group—in this case, the residents of Cambridge slated for displacement by the proposed highway—no longer seem to be the central issue for the planners. Rather the issue has been defined by the planners themselves, who have, in so doing, followed a course not wholly dissimilar to the means by which conventional planners ascertain the general interest. The citizen "client" group seems here to serve a kind of legitimizing function which permits the planners to represent themselves as something more than merely proponents of another opinion.

Indeed, the Inner Belt issue clearly reveals a number of ways in which the analogy between "advocacy planning" and legal representation breaks down. The lawyer responds to the needs of a client; there is nothing in planner ethics to prevent his starting with an issue and looking for a clientele whose interest is involved. Further, the experience of UPA shows that many issues, if raised at all, will be raised only in this way; what "client" will raise the issue of the distribution of public resources as between highways and mass transit? It clearly shows also how the advocate planner has no such clear forum and procedures for adjudication as does the lawyer; his issues are adjudicated in the forum of politics, where opposing forces come to a power confrontation. So UPA, in opposing the Inner Belt, found itself working with petitions, meeting with Senators, abetting protest marches. In the Lower Roxbury case, too, although there was a long period of negotiation between clearly defined groups, in the end the decision would have to rest in a show of power in the City Council voting.

CONCLUSIONS

Advocacy planning here appears as a new kind of politics. It seems to be, on the one hand, a way in which localized urban interests can be expressed in a political system from which ward politics have all but disappeared. In this respect, it falls in with a number of other current efforts to decentralize the work of government—ranging from Carl Linn's small community-built parks, to the local planning entities of the War on Poverty.

But it has another potential political function that, as in those community planning projects which raise conflicts between homeowners and tenants, may compete with its function to express the local community interest. It can be a way of dealing with issues which are not particular to any single local community—issues of race and class, and of particular interest groups as these emerge in the context of the technical and managerial apparatus with which our kind of society runs. One hears with greater frequency, for example, the bitter slogan, "Negro Removal," for Urban Renewal—a clear if not specific or localized articulation of an interest group. There are other interests, like those of groups dependent on mass transit, or on very low-cost housing, which are also widely dispersed and concomitantly harder to articulate politically.

Finally, advocacy planning may be one of the channels of action through which people may try to humanize their technical apparatus; to make society less "one-dimensional"; to prevent the exercise of bureaucratic power from leading to a new, diffuse despotism, in which power appears in the image of technical necessity. Perhaps in advocacy planning we may find a new means for political expression, one which is appropriate to a time that has seen the end of ideology, but that finds social management institutions more and more the determinant of human possibility.

It may well be argued that the politicizing of our management apparatus will mean its incapacity to act: that if every group affected by planning is permitted to argue for its interests, no projects for a common good can ever be carried out. The danger is, I suppose, a real one. But at the same time, to the efficiency argument the remarks of the Cahns on coordinated community-wide structures for the provision of social services seem relevant:

> Monopolies are characterized by tendencies to expand, to perpetuate themselves, and to operate at less than optimal efficiency. These tendencies do not disappear when the market monopolized is the market for social services or when the product is social change. In such a market monopoly power presents special hazards because it can be used to achieve insulation from the democratic market place, to secure relative immunity from criticism and evaluation, and to obviate genuine responsiveness to consumer demand.[15]

I would suggest that the weight of the evidence so far implies that the very considerable short-term inefficiencies and exasperations of advocacy are paid for by the pressure which they generate for a social policy more sensitive and adaptive to social reality. At the same time, the experience summarized briefly here should be enough to suggest how far we have to go and how difficult the job of developing social policies which effectively articulate the interests of the people at the bottom of the system. Our policies are always approximations; we can hope only to work toward making them better approximations.

Our new planning and policy approximations will tend to take a form which reflects the sources of support for the advocacy planner. Were advocacy planning to be done from some sort of ombundsman's office, for example, the issues would tend to be defined as ones of protecting individuals or particular small groups in the framework of some sort of "larger" societal interest. Were the Negro rights organizations to develop planning staffs in the way they have for years used legal staff, the issues would tend to be those of the thrust of a disadvantaged group for a larger share of the community's resources. It would probably take a source of support more directly tied to some radical political movement to define the issues as those of the general social and economic order, which sorts some people into suburbs and others into slums. Such a development might, indeed, tend to dispense altogether with the community "client" in the name of which the advocate planner speaks, and represent itself as simply radical planning.

NOTES

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Inventing a Future Civilization

To avoid the calamity suggested by ominously rising world population and pollution, an entirely new system of planning is required. The new system would enable mankind to develop a vision of a better future, and then re-orient his institutions to achieve it.

by Charles W. Williams, Jr.

Scholars and scientists who have studied the social and technological trends now current in the world appear increasingly pessimistic regarding the future of man. The crisis of confidence in the human future is rooted in an awareness that in an increasing number of areas, long-range projections of current patterns suggest undesirable eventualities -- the collapse of civilization, worldwide totalitarianism, or even the disappearance of human life from this planet.

To many people, the future now is a threat. They doubt that we have the necessary ability and will to re-direct the social and environmental trends that seem to portend disaster. Overpopulation, environmental degradation, and the exhaustion of natural resources are among the undesirable futures that we seem to be steadily approaching.

Pessimism affects not merely a few world-weary intellectuals, but even ordinary citizens. A recent survey reported in *The Washington Post* concluded that for the first time in U.S. history, people of all backgrounds, all races, both sexes, and all ages, felt pessimistic about the long-range future of both the nation as a whole and themselves as individuals. Paradoxically, such pessimism has arisen at the very moment when our power to shape our future and even the destiny of mankind has reached historic highs.

I would like to say that this pervasive pessimism is not based on an accurate appraisal of our present situation, but I cannot. If one extends into the future the rising curves of population and pollution, we do indeed face probable outcomes that are terrifying to contemplate. Either we must alter our values to accept non-survival or totalitarian control, or we must somehow achieve a basic reorientation of our institutions to create new social processes that will permit the development of a world more to our liking.

Despite the rampant pessimism, I believe that it is still possible to have a responsible vision of a believable, workable future. I do not think that our social institutions are incapable of innovation on the scale that will be necessary for us to advance successfully into the new post-industrial era.

My optimistic view rests on a belief that it will be possible for us to take two major steps in our public policy-making:

First, we must extend our time-frame for policy formulation. The customary two, three or five years is a totally inadequate span for developing the policies needed to respond to the challenge. Extending the time-frame, of course, will encounter obstacles. Policy-makers are pragmatists, and generally feel that they cannot take into consideration "blue-sky" abstractions. But the fact is that many of our

"Moving toward a desirable future will require much rethinking of our present approaches to planning. Already there is a search for adequate language to convey the concepts that are struggling to be born. Terms like non-policies, counterintuitive responses, societal cybernetics, and non-systems now are being heard."

future options become feasible only if we are able to think in a framework of 20 or 40 years. Within that time period, it is conceivable to think about working out a complete transformation of our social system—a transformation that could give our society the qualities we would like it to have.

Second, the perspective employed in policy development must be substantially broadened to take cognizance of interdependencies and qualitative consequences. In order to develop strategic alternatives, it is inadequate even to think in the context of a system as huge as the entire U.S. Government; we must think about the total behavior of the society, which is the outcome of many individual decisions made in a very pluralistic set of diverse institutions. Collectively, the actions taken in these many areas become national and international policy. All decision-makers in large organizations make policies that are national in scope, but no one individual or institution makes national policy.

How Much Change in the Next 30 Years?

We can begin thinking about the next 30 years by recognizing that there are at least three possible views concerning the rate of overall social change during the next three decades.

The first view is that the world of 30 years hence will be about as different from today's world as the world today is different from the world of 30 years ago. In other words, the experience of the past three decades gives some indication of the scope, pervasiveness, and character of change that we will undergo in the next three. Ten or 15 years ago that would have probably been considered the most scientifically responsible basis on which to begin making conjectures about future developments. Today, however, this view would be called naive. There now are a number of systematic studies that invalidate the view that developments during the next 30 years are going to be of the same general scope as those in the past 30.

If we in 1972 think back to the world of 1942 and all the changes that have occurred, we can easily find it mind-boggling to try to project that amount of change into the future. Yet practically everything in our research indicates that that amount of change is probably a **gross understatement** of what we should expect.

The second view assumes that the rate of change has greatly speeded up in recent years, and suggests that responsible conceptualization of alternative futures for the next 30 years should conceive of that change as being equal in scope to perhaps the past 80 or even 120 years. That is to say, the year 2002 would be as different from 1972 as 1972 is from 1892 and 1852!

The second view takes account of the speed-up of change but still conceives of the future in terms of increments in current trends. Change will occur faster, but there will be only a few random changes that will halt or reverse the trends, or start entirely new ones.

The third view is that the next 30 years will witness a change as enormous in scope as the industrial revolution; that is, the change during the next 30 years may be equal in scope to the change of the past two or three centuries!

I believe that this last view—though it utterly confounds our thinking—may be the most accurate.

Many scholars have suggested that we are indeed entering a new age, whether they label it "post-industrial," "scientific," or whatever. The scholarly analyses are consistent in concluding that we are moving through a historic transition as fundamental as the metamorphosis from agricultural to industrial society.

Centuries Compressed into Decades

If we are to conceptualize the development of human society during the next 30 years, I think we may well begin with a proposition running something like this: *During the next 30 years, mankind may move through a series of changes which collectively are as significant as was the transition from agricultural to industrial society. We may accomplish in decades what previously required centuries.*

If we accept that proposition, we immediately face the problem of where to look for conceptualizations equal to a social transition of that magnitude. It might seem natural to turn to professional planners, who now have a number of highly sophisticated methods. But in my judgment the present planning methods and systems are completely inadequate to the task we face. There now is a critical need to go beyond planning—to move into the domain of futuristics—in order to develop a sound basis for strategic policies. Our current systems of planning are failing due to their lack of vision.

An example of the failure of planning is the strong trend toward the aggregation of the U.S. population in a few

Author Charles W. Williams, Jr. (left) chats with Senator Walter F. Mondale of Minnesota following a Society luncheon in Washington. Formerly staff director of the White House's National Goals Research Staff, Williams currently is Deputy Director of Stanford Research Institute's Center for the Study of Social Policy. He is Vice President of the World Future Society.

megalopolises. (See the October 1970 issue of *THE FUTURIST*, which was devoted to population distribution.) In our work at the National Goals Research Staff, we became convinced that this trend is reversible: the clotting together of people is not based on natural forces nor is it an inevitable consequence of the industrial revolution nor an expression of the genuine preferences of people for megalopolises. Rather, the trend toward megalopolis arises from decisions which systematically create that trend and which reinforce it. A business corporation planning to build a new plant generally chooses a site close to a population center so that there will be supporting services for the plant and a pool of labor; at the same time, the location of the factory at that site means that more people will move to the area and businesses will come in to supply the services that will be needed.

The trend to megalopolis, which feeds on itself, could be reversed if there were **a strong national vision of a demegalopolized society**, and if the decisionmaking process of the nation could be placed in a new organizing framework. The Government might then locate a new airport site far away from present population centers—in the "middle of nowhere," so to speak—and encourage the development of railroads and other transportation facilities, electric power plants, etc. With good transportation and energy available, industries would be motivated to move in, and they would inevitably be followed by services and population.

During the next decade, about $1.5 trillion of investment will be made in capital facilities in the U.S. Most of it will be private investment and most will be made under the assumption that the concentration of population will intensify: Transportation, energy, and other systems will be laid out so as to promote an agglomerative trend that does not come about by national choice, but by a failure of our present system of planning.

New visions can form the basis for redirection of our institutions. The lack of such a vision may be attributed, paradoxically, to the desire of planners to be relevant. Seeking relevance, planners base their work on past decisions and projections of current trends, thereby imposing on the future the dominant patterns of the past and making tomorrow a rigid extension of today.

Alternative Futures Must Be Developed

If we are to manage our affairs successfully in the coming decades, we must create a planning process that encourages the development of the alternative futures, visions of a better tomorrow, that become feasible once we begin to look at social problems in a long-range, macro-systems context.

Another requirement if we are to negotiate a successful transformation of our society during the coming decades is that we must go beyond the long-term trend known as reductionism—the specialization that is so pervasive in intellectual enterprises. Breaking problems down to manageable size has proved enormously effective, as amply demonstrated by the proliferation of scientific disciplines and the powerful technologies that have resulted. But the complexity of interdependencies in our society demands a new kind of organizing framework by which a pluralistic society can effectively direct its affairs.

There are two schools of thought concerning the development of such a conceptual framework: The first maintains that it is impossible to achieve. The second argues that it is possible but extraordinarily difficult. I believe that the latter view is correct, and that we **must develop such a framework** within the next two decades—despite the difficulties that must be overcome—or it may be too late.

New Social Policy Research Center Is Created

Author Charles Williams was recently named Deputy Director of the Stanford Research Institute's newly-created Social Policy Research Center.

He says the Center offers "an institutional means for comprehensive, sustained, synthesizing policy research that links the various aspects of decisions made in individual contexts with one another and with the collective total picture and the longer-range perspective."

The Center has three basic functions:

1. Long-range trend analysis, and forecasting of alternative futures for the nation and/or various political and economic subsystems.
2. Assistance in the formulation of policies in government, business, and quasi-public institutions.
3. Helping to catalyze institutional and social inventions that can help the nation achieve a high quality future.

The Center is directed by Willis W. Harman, director of SRI's Educational Policy Research Center, which now is a part of the Social Policy Research Center.

(For further information about the Center, write: Charles W. Williams, Jr., Stanford Research Institute, 1611 N. Kent St., Arlington, Virginia 22209.)

The route toward developing such a framework lies, I believe, through the new concepts that are developing in futuristics. In any event, the articulation of alternative futures for entire nations and even for the world as a whole is, in my judgment, the greatest need of our time. Each alternative vision should describe a workable world and a chart for getting there. At the same time, each alternative future should include a conceptual scheme that will allow policy decisions made in a very pluralistic setting to mesh in a workable system. Such alternative futures will make it possible for us to move toward a future that is different from the future suggested when we project the current trends.

In recent years, we have seen the beginning of a slow conceptual revolution in terms of our attitude towards the future. The revolution began with technological forecasting, which developed most rapidly in the defense industries. The defense technologists became increasingly aware that developments once regarded as impossible by the leading experts later came to pass, because the constraints to their achievement were systematically overcome by research. As a result, the defense strategists began to recognize that research budgets can be the instruments of making it possible to build not only apparatus that had never been built but apparatus that was believed to be totally impossible to build under any circumstances.

Gradually, the defense planners began to recognize that the principal limitations to developing new technology were not natural theoretical constraints—"the laws of nature"—but rather the limited human conceptualizations through which visions of how to proceed must come.

The tremendous power of this new view is still little understood, but it made possible the tremendous development of space, electronic, and medical technologies in the

"A non-policy may be said to exist when an organization does not have a policy concerning something. But the absence of a policy does not mean that the actions of the organization have no impact in the area that might be covered by a policy."

past few years. The view is now spreading through the community of government officials, scholars, businessmen, and others, and it opens up broad new vistas on what man can do.

The average man shows some glimmering of the concept when he makes a comment like, "We can put a man on the moon but we still can't do anything about (poverty, traffic, pollution, etc.)." Putting a man on the moon was made possible by research and development budgets, which were instituted once the goal was conceptualized and accepted. Abolishing poverty would also be possible if we were able to conceptualize the problem in acceptable terms.

Our failure to eliminate poverty and solve other intractable problems is probably mainly due to our limited conceptualizations of them—a "failure of imagination," as it were—and people show some appreciation of this fact when they connect the success of the space effort with the failure of the war on poverty.

In recent years, the realization has slowly dawned that the future is not totally unknowable and not beyond our control. The future is shaped by human decisions, and therefore it is important for us to become aware of what we are doing when we make a decision that will determine the shape of things for years to come.

New Concepts Needed to "Invent the Future"

Once we recognize that the future is created in large measure by our present decisions, we become aware of our need to recognize that there are alternative futures that we are either helping to achieve or forestalling by our present decisions. For this reason our decision-making must be based on visions of the world that may be realized, and these alternative futures must be developed by a labor of imagination and thought. For this reason, the phrase "inventing the future" has become current. If we are to have a future of promise rather than threat, we must conceive that future and then develop ways that our institutions can work collectively to bring it about.

Moving toward a desirable future will require much rethinking of our present approaches to planning. Already there is a search for adequate language to convey the concepts that are struggling to be born. Terms like non-policies, counter-intuitive responses, societal cybernetics, and non-systems now are being heard. These concepts, once understood, can help us to move successfully toward a desirable future.

Let us consider six of these new concepts:

1. Non-policies. A policy may be defined as the course of action adopted by an organization. A non-policy may be said to exist when the organization does not have a policy concerning something. But the absence of a policy does not mean that the actions of the organization have no impact in the area that might be covered by a policy. Environmental degradation was deeply affecting people's lives long before the U.S. Congress had any clear policy designed to protect the environment; that is, when the Government had a virtual non-policy toward the environment.

We now are becoming increasingly aware that our actions have effects that we do not intend, and that to make no choice is itself a choice. Many studies have impugned the value of policies that promoted such "obviously good" choices as increasing agricultural productivity and economic growth, building public housing in city slums, constructing miles of highways, etc. These studies point to unintended and unforeseen consequences in areas that were not the subject of government policy.

One may reasonably wonder if the decisions being made today to cope with the effects of these earlier policies will stand up any better when evaluated several decades from now. Furthermore, we must be aware that the costs of inadequate performance are becoming much higher. Decisions in our highly technological, highly integrated, highly interacting, highly interdependent set of social systems have a greater power to affect other segments of society than was possible in previous periods of history.

2. Non-systems. A complex technological society like our own is composed of innumerable sub-systems operating within a larger system. We have traditionally assumed that the various subsystems would be guided by something roughly analogous to the economists' "invisible hand," so that they would collectively constitute an effective total system. Today we are becoming increasingly convinced that this is not the case: The various sub-systems, each working reasonably well if considered by itself, may combine to create a problem for the effective operation of the system as a whole. Since the systemic inter-relationships are real but the totality is not explicitly put together as a system, I have come to refer to this totality as a "non-system." It seems to me clear that if we are to move toward a quality future, we must somehow learn what the non-system is and how it can be effectively governed. At present, the non-system is so enormous and so complicated that we find it difficult to know even how to begin to think about it.

We have little capacity to deal with the reality of non-policies in non-systems. Even today, when we face a mounting world crisis, at the macro-level, practically all of our professional attention goes into dealing with micro-policies in micro-systems. This would be fine if we knew how to fit policy and system into the macro context, but so long as we continue to couch policy and system only within the micro-context, we may pay most attention to the relatively insignificant aspects of the world that public administration must deal with.

3. Recognition of uncertainty. We need to learn how to redirect the "scientism" of decision-making methodology and theory into a more realistic recognition of uncertainty. We yearn so strongly for the security of certainty in our actions that we do not hesitate to construct artificial supports which give the appearance or illusion of certainty.

The quantitative methods developed and applied to physical systems have been adapted for social systems partially because they so powerfully appeal to our longing for certainty. Unfortunately, statistical probability often is used to suggest the surest pathway rather than to underline the high degree of uncertainty. By narrowly defining the boundaries to accommodate quantifiability and then developing probability factors, we are prone to accept the highest probabilities as if they were certainties. Somehow we need to become more comfortable with uncertainty, and recognize a variety of possible outcomes.

4. Breaking the deterministic bias in planning. In most planning today, there is an implicit insistency that a plan be a deterministic instrument; that is, the plan must determine what happens. The first reason for this is the tendency to insist that the plan be an articulation of policy decisions. As a consequence, the entire institutional resources are amassed to execute the plan. The second reason is the feeling that a plan must deal only with those activities and aspects of the social system that the institution for which the plan is developed controls or must react to. The third reason is that to insure that the planning is really "practical," the time period is usually limited to no more than about seven years—and often not nearly that far ahead.

These influences result in planning that is so constrained in scope and time that only projected increments to existing patterns are developed. For this reason, everyone who is unwilling to accept the projections of existing patterns is delighted when the planner is ignored. If planning is to become a positive instrument for the qualitative changes needed to create a better world, it must become more than a projection of the present dominant patterns.

5. Acceptance of value choices. We need to become comfortable with the fact that all policies and plans represent value choices, and we need to make explicit the values underlying our policies.

We have worked hard to develop objective methods for decision-making. These methods have become so sophisticated that they often hide the operative values which are the most important aspects of choice. To test the validity of this point, you might raise the following question at your next cost/benefit analysis session: What does the program assume about the nature of man? The problem of articulating our values is real because they are embedded in every program and all of our day-to-day activities. We must begin to articulate the basic assumptions and underlying value judgments that are inherent in any policy choice and any projected future.

6. Recognition of indirect causes and indirect solutions. In the 1960s we began to understand more clearly than ever before that actions have indirect consequences. Therefore, we must look beyond the system and we must take into consideration second, third, and fourth order consequences. And we cannot evaluate a system by looking solely within that system; we must know its impact on other systems.

> **"Our failure to eliminate poverty and solve other intractable problems is probably mainly due to our limited conceptualizations of them —a 'failure of imagination,' as it were—and people show some appreciation of this fact when they connect the success of the space effort with the failure of the war on poverty."**

In the decision-making of today, we customarily define a problem in a straight-line way: direct cause—direct effect. Then we try to develop solutions in an equally straight-line way. If you have got to move more people from here to there, and if most people have automobiles, you build more highways so that the people can drive to where you want them. The solution cannot be faulted on logical grounds, and yet it doesn't seem to be very consistent with our objectives. As a result of such straight-line thinking in transportation, it is possible to drive across Manhattan Island today at about the same rate as in 1905!

Such experiences should spur a search for indirect solutions—that is, actions in areas far removed from the problem we are trying to solve. Many problems do, indeed, appear to be susceptible to such indirect solutions: For example, the answer to the transportation problem in metropolitan areas might be to change policies in the Agriculture Department which have led to such high productivity that millions of people have been forced off the land and into the cities. Or perhaps the answer might be to build alternative urban centers by laying out transportation networks where there is at present no demand.

Until recently, most officials trying to solve the problem of educating ghetto children believed that the best way might lie in pumping more money into public education systems in the inner cities (a direct solution). Yet, after investing hundreds of millions of dollars, many officials assert that while the money may have been spent for a good cause, it did not very effectively improve the children's educational performance. A survey of indirect solutions—changed housing laws, improvement in employment practices, or income maintenance plans—might have revealed a more effective way to solve the problem.

Recently a State Director of Psychiatry told me that if he had the authority he would fire the psychiatrists on his payroll and give the money saved on their salaries to the State Director for Income Maintenance. The Director of Psychiatry felt that the mental health needs of his clients would be better served by income maintenance than by psychiatry! Such indirect solutions need to be explored if we want to avoid the present situation where we can have more teachers and less learning, more doctors and less health.

In conclusion, I would suggest that there now is a need for a "new morality" in policy formulation: We must become conscious stewards of the future, and in some instances make genuine sacrifices of some present opportunities in order to realize a livable future. At the individual level, this may mean giving up certain time-honored privileges such as having as many children as we want. At a national level, it may mean re-orienting our economy so that it produces fewer goods but causes less environmental pollution.

The devotion that we give to our stewardship of the future will likely determine not only the quality of our future—but perhaps whether we have one.

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